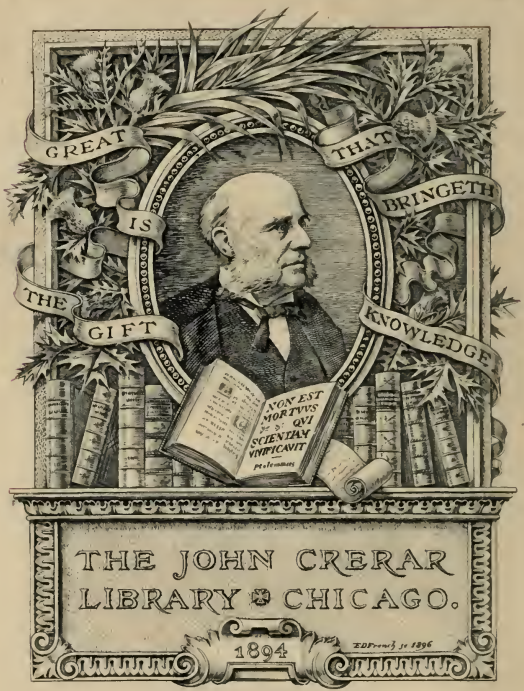

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CATALOGUE

1902-1903

ALLEGHENY COLLEGE

FOUNDED IN 1815

Entered as second-class matter in the postoffice at Meadville, Pa.

EIGHTY-EIGHTH YEAR

Withdrawn

Allegheny College Catalogue

FOR

1902-1903

PUBLISHED BY THE COLLEGE
MEADVILLE, PA.
1903

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Description of the College.

Organization.

Allegheny College was organized in 1815 by citizens of Meadville. Two years later they obtained for their institution a liberal charter, and in 1820 laid the foundation of Bentley Hall. In 1833, by a contract between the Trustees and the Pittsburg Annual Conference of the Methodist Episcopal Church, the College came under the control and patronage of the Methodists of this central region. By successive divisions of the Pittsburg Conference, the control and patronage are now vested in the Pittsburg, Erie, East Ohio, and West Virginia Conferences. The contract between the Conferences and the Trustees guarantees a liberal and unsectarian spirit in the management of the College, and the students always represent several religious denominations.

Location.

No city in Western Pennsylvania is more advantageously situated than is Meadville. It has two lines of railroad: the Erie, and the Bessemer & Lake Erie. It has also direct connections with the Lake Shore and the Pennsylvania systems. By these routes Pittsburg and Cleveland may be reached in less than four hours, Erie in two hours, Cincinnati in twelve hours, Chicago in thirteen hours, and New York in thirteen hours. An electric road gives direct communication with Erie. Thus easy and expeditious access to the city is had

from all points. The population of the town is over 10,000; it is an old and well established city, having cultured society and many educational influences. The city has most of the modern improvements, such as paved streets, a complete sewerage system, electric lights, illuminating gas, and natural gas fuel. An electric street railway connects all parts of the city with the college grounds.

Buildings and Grounds.

The College campus embraces sixteen acres on the north side of the town, having an elevation of two hundred feet above French Creek Valley, and twelve hundred feet above the level of the sea. It is well shaded with trees, and has a beautiful outlook upon the town and the surrounding country. In natural beauty the campus is very attractive, and the situation is one of the most heathful in the country. Extensive improvements have recently been made in grading and in laying granolithic walks. There is a quite complete representation on the campus of the forest trees of this region, and a systematic effort is being made to improve and enlarge this collection.

The surrounding country is remarkable for its beautiful and diversified scenery, and, apart from its great interest to lovers of nature generally, offers unusual opportunities to students of Geology and Botany.

All the College buildings are heated from a central steam plant and every effort is made to keep them in an attractive and sanitary condition.

Bentley Hall, a fine specimen of Colonial architecture, bears the name of Rev. William Bentley, D. D., of Massachusetts, who gave his valuable library to the

College. The corner stone was laid July 6, 1820. It consists of a central building three stories high above the basement, and two wings two stories in height, and is devoted to recitation rooms, biological laboratories, society halls, and the offices of the President and the Registrar of the College.

Ruter Hall, named after Rev. Martin Ruter, D. D., the second President of the College, is a substantial brick building, erected chiefly by the citizens of Meadville, in 1855. This building contains the museum of the College, and the recitation rooms of the Preparatory School.

Hulings Hall is a large brick edifice, erected in 1881, by Marcus Hulings, Esq., of Oil City, and the citizens of Meadville. It is used as a home for young women, and has rooms for sixty. It is about one hundred by eighty feet on the ground, and four stories in height, including the mansard roof, and is supplied with all modern improvements.

Wilcox Hall of Science is a modern building, perfectly adapted to the needs of scientific work, and devoted solely to instruction in Physics and Chemistry. The lecture room is in the form of an amphitheater and will seat one hundred and twenty students. There are ten working rooms. The laboratories are well equipped with illustrative apparatus, and new pieces are constantly being added.

Gymnasium.—The building is in the early Italian style of round arched brick architecture, the first floor being of native rock-faced stone, the upper portion and rear extension being of brick. The building is T-shaped in plan, the front portion being two stories high, and containing on the first floor the director's

room, locker room, and baths. On the second floor are large assembly and committee rooms for the Young Men's Christian Association. The gymnasium floor occupies the rear extension. It is well lighted from the three sides and has a clear height of twenty feet from floor to bottom of steel roof trusses, from which are suspended the running track and the usual gymnasium apparatus. The building is finished in natural wood throughout, and has hard wood floors. It is equipped with all the modern apparatus of a first-class gymnasium.

Newton Observatory.—This building, completed in 1901, was built from funds contributed by Mrs. Mary M. Newton, of Batavia, Illinois, in memory of her husband, Captain D. C. Newton, who was once a student in the college. It is a stone building of fine architectural appearance, containing, in addition to the observing room, a transit room, a computing room, and the director's office. The mountings and other fixtures were supplied by Messrs. Warner & Swasey, Cleveland, Ohio.

Ford Memorial Chapel.—Captain John B. Ford, of Creighton, Pa., gave thirty-four thousand dollars for a new chapel, in memory of his wife. The corner stone was laid in June, 1901, and the building dedicated one year later. It is of rock-face Cleveland sandstone, in Gothic-Romanesque style, with an auditorium seating four hundred fifty, besides a gallery seating one hundred fifty, and an oratory seating one hundred fifty. In the richness and chasteness of its exterior finish and interior appointments the building is one of the finest college chapels in the country.

Mrs. James V. Ballantyne and Misses Nellie and

Stella Ford, granddaughters of Captain Ford, contributed six thousand dollars for a pipe organ for this building. This splendid instrument was designed by W. L. Mayer, of Pittsburg, and was built by the late Julius Neef, of Philadelphia. It has three manuals and pedals and 1,920 pipes, and is supplied with all the latest and best devices of great organs.

The Library Building.—This building, the gift of an anonymous donor, is of vitrified brick with terra cotta trimmings, in Italian-Renaissance style. It is eighty-five by seventy-four feet, and in addition to a spacious general reading room and the usual stack room, cataloguing room, and librarian's rooms, contains a large reference reading room and several seminar rooms. The building is fire-proof and has room for one hundred thousand volumes. The aim has been to make it both beautiful architecturally and eminently practical. A year's use has shown it to be perfectly adapted in every way for the peculiar uses of a college library.

Admission.

All the subjects required for admission are arranged in Groups, which will be found below.

The particular groups required for admission to each of the several courses will be found designated on page 16.

Groups.

I. ENGLISH—1. *Reading and Practice.* A limited number of books are assigned for reading. The candidate is required to present evidence of a general knowledge of the subject-matter of these books, and to answer simple questions on the lives of their authors. The form of examination will usually be the writing of a paragraph or two on each of several topics, to be chosen by the candidate from a considerable number—perhaps ten or fifteen—set before him in the examination paper. The treatment of these topics is designed to test the candidate's power of clear and accurate expression, and calls for only a general knowledge of the substance of the books. In place of a part or the whole of this test, the candidate may present an exercise book, properly certified to by his instructor, containing compositions or other written work done in connection with the reading of books. In preparation for this part of the requirement, it is important that the candidate shall have been instructed in the fundamental principles of rhetoric.

The books set for this part of the examination will be:—

1903, 1904, and 1905—Shakspere's Merchant of Venice and Julius Cæsar; Sir Roger de Coverley Papers in "The Spectator"; Goldsmith's Vicar of Wakefield; Coleridge's Ancient Mariner; Scott's Ivanhoe; Carlyle's Essay on Burns; Tennyson's Princess; Lowell's Vision of Sir Launfal; George Eliot's Silas Marner.

2. *Study and Practice.* A smaller number of books are assigned for more careful study. The examination upon these books covers subject-matter, form, and structure, and also tests

the candidate's ability to express his knowledge with clearness and accuracy. In addition, the candidate may be required to answer questions involving the essentials of English grammar, and questions on the leading facts in those periods of English literary history to which the prescribed works belong.

The books set for this part of the examination will be:—

1903, 1904, and 1905.—Shakspere's Macbeth; Milton's L'Allegro and Il Penseroso, Comus, Lycidas; Burke's Speech on Conciliation with America; Macaulay's Essays on Milton and Addison.

II. Mathematics.—Arithmetic, including the Metric system. Algebra, through Quadratic Equations. Geometry, Plane, Solid, and Spherical; eight books of Wentworth's Geometry or an equivalent.

Ordinarily the time spent should not be less than five hour recitations weekly for two full school years.

III. Latin.—Grammar (Allen and Greenough's preferred). Composition, Collar or Daniell. Cæsar, Gallic War, four books. Cicero, seven orations (the Manilian law to count as two). Vergil, Aeneid, six books. The Roman method of pronunciation is used.

Ordinarily the time spent should not be less than five hour recitations weekly for three full school years.

IV. Greek.—Grammar (Goodwin's preferred). First Greek Book, Gleason and Atherton, or White. Xenophon, Anabasis, seven books. Prose composition, Collar. For the last three books of the Anabasis an equivalent in other Attic prose or in Homer will be accepted.

Ordinarily the time spent should not be less than five hour recitations weekly for two full school years.

V. German.—Joynes-Meissner Grammar completed; translation of four hundred pages of modern German prose and one classic drama; some practice in conversation.

Ordinarily the time spent should not be less than five hour recitations weekly for two full school years.

VI. French.—Chardenal's Complete French Course completed; Whitney's, or Super's, or Rollins' French Reader; also six hundred pages of modern prose fiction and four classic dramas translated; some practice in conversation.

Ordinarily the time spent should not be less than five hour recitations weekly for two full school years.

VII. History.—United States, Johnson, or Montgomery.

Eastern Nations and Greece, Botsford. Rome, Myers. Civil Government.

VIII. SCIENCE.—Physical Geography, Davis. Physiology, Walker. Natural Philosophy, Gage, with experiments.

More extended work in one or two of the above subjects will be accepted in place of shorter courses in the three. Elementary Biology or Chemistry will be accepted in place of one of the subjects.

Of the above groups there are required for admission:

To the CLASSICAL COURSE, I., II., III., IV., VII., VIII.

To the LATIN-SCIENTIFIC COURSE, I., II., III., VII., VIII., and IV. or V. or VI.

To the LATIN AND MODERN LANGUAGE COURSE, I., II., III., VII., VIII., and V. or VI.

To the ENGLISH AND MODERN LANGUAGE COURSE, I., II., VII., VIII., V. or VI., and III., or additional work, fully equivalent in quantity and character, in modern languages, history, or allied subjects.

To the CIVIL ENGINEERING COURSE, I., II., VII., VIII., and V. or VI. For V. or VI. two full years' work in Latin, covering two-thirds of Group III., will be accepted. In that case the student is urged to take both German and French in his college course.

Students who have not fully completed the subjects specified for the course they wish to enter may be admitted to the Freshman Class conditionally, if the sum of their deficiencies does not exceed a half year's work. They will be admitted to such college classes as they may be qualified to enter and will be given an opportunity to bring up their deficiencies in the Preparatory School. Under certain fixed restrictions credit may be obtained at entrance for work done in college subjects,

and such advanced credit may be offset against deficiencies in preparatory work until the latter can be removed.

All admission conditions must be removed before the beginning of the Junior year.

Examinations.—Examinations for admission are held on Monday and Tuesday of Commencement week, and on Saturday and Monday preceding the opening of the Fall Term.

All examinations away from Meadville are under direction of the College Entrance Examination Board, whose certificates are accepted in place of examinations in all subjects.

Admission by Certificate.—Certificates for all the above work will be received from approved schools. The right is reserved, however, to require preparatory work from students who are not able to make satisfactory progress in college classes. In all cases an examination in English is required, adapted to test the candidate's power of correct and idiomatic expression. No candidate will be accepted in English whose work is notably defective in point of spelling, punctuation, idiom, or division into paragraphs.

Principals of schools desiring to be placed on the approved list are invited to address the President.

Certificates from the Regents of the State of New York will be accepted. All others must be made out on special blanks, which will be sent on application. No other certificates will be received.

General Purpose.

This institution is a college, that is to say, a training school. Its purpose is to prepare those students who pass to the Bachelor's degree for any kind of professional study, but it does not undertake to prepare a student to enter upon any profession without special study. And it advises its graduates to avail themselves of the advantages of well-equipped universities. The experience of the college proves that its graduates are able to distinguish themselves in various professional careers, whenever they have added to their college training the special equipment for success in such professions. This general purpose controls the methods of the college in all departments of instruction. The end sought is not complete knowledge of any branch of study, but thorough discipline and correct habits of observation and reflection.

An increasing proportion of our graduates enter not upon professional but upon business life. The general principle above stated applies to them with as much force as to those who enter professions. The training of a college does not teach a man how to do business successfully, but it does prepare him to learn any business rapidly, and to attain large success, if he has the requisite talent.

Courses of Study.

The college has three parallel courses of study, which lead to the degree of Bachelor of Arts.

I. The Classical Course combines all the excellencies of the time-honored classical course. By immemorial use it has proved its eminent value, and is

worthy of the confidence and respect which a long venerated observance gives. For a full and harmonious preparation for the varied professions and employments of life, it is unexcelled. The wide range of electives in the Junior and Senior years enables a student to do special work in favorite lines.

II. The Latin-Scientific Course requires the same preparation as the Classical, but French will be accepted in place of Greek. This course includes extended work in Mathematics and the chief science subjects, and by extensive laboratory practice prepares the student for original research. The name of this course, hitherto Scientific, has been changed in order to emphasize the liberal proportion of culture studies in it and the fact that it leads to the A. B. degree. The needs of those persons who desire a scientific course without Latin are met by the Civil Engineering Course.

III. The Course in Latin and Modern Languages requires the same preparation as the Classical, except that two years of French or German are substituted for two years of Greek. Two years of German or French are substituted for two years of Greek in the Freshman and Sophomore years. This course is adapted to the needs of those who prefer to omit the Greek entirely and give more time to the modern languages.

The Course in English and Modern Languages, leading to the degree of Bachelor of Letters, requires the same preparation as the course in Latin and Modern Languages, except that for the three years of Latin there may be substituted two years of German, and extra work in Literature, History, or Science. This course offers thorough training in English, History,

and the Modern Languages, with liberal electives in other departments, and is especially adapted to the needs of those who want neither Latin nor Greek.

The Civil Engineering Course.—The object of this course—which is not parallel to the literary courses—is to fit young men for civil engineering, and to furnish a thorough training in scientific studies. The course is thoroughly practical and adapted not only to those who intend to practice engineering as a profession, but also to the wants of a class of students desiring to fit themselves as soon as possible for some of the numerous new pursuits opened by modern invention and science. The technical work of the Junior and Senior years may be omitted by those who do not desire to pursue engineering as a profession. Such persons will take further work in Biology and Philosophy, as is explained in connection with the table of required work. This course leads to the degree of Bachelor of Science.

Special Students.

Persons desiring to pursue studies in the College are, as a rule, required to be prepared to enter the Freshman class as a candidate for some one of the degrees. Under exceptional circumstances, however, persons who are not candidates for a degree may be admitted as special students and allowed to pursue selected studies. Every such person shall be required to satisfy the Faculty that he is prepared to do, with profit, the work which he selects. Each case will be decided on its own merits.

Courses of Instruction.

In this detailed description of the courses of instruction the number of "hours" refers to the number of hour recitations per week.
All courses are offered yearly, except as specially noted.

Biology and Geology.

It is the aim of this department, on the one hand, to give the student a general knowledge of the fundamental facts and principles of Biology and Geology; on the other hand to familiarize him with the methods of investigation in these sciences as a preparation for advanced work and original research. Text book and lecture work is largely supplemented by various lines of practical work in the field, the museum, and the biological laboratory.

In Biology the needs of those students who are intending to enter the medical profession are especially regarded; and, so far as practicable, their work is arranged in harmony with the entrance requirements of the best medical schools of the country.

In Geology the class work is supplemented by lectures and by frequent excursions to points of interest in the vicinity. As much field work is done as possible in the time allotted to the subject. Considerable time is spent in the museum.

In this department two hours of laboratory work are counted as equivalent to one recitation hour.

COURSE I.—General Biology. The first half year is devoted to the study of animal life. The object in view is to give a comprehensive view of the whole field rather than to emphasize

any particular side of the subject. In the laboratory work, a series of typical animals is studied. During the latter part of the winter term, the study of a typical plant is taken up as a preparation for general work in Botany during the following spring term. Two hours of recitation, two of laboratory.

Throughout the year, three hours.

COURSE II.—Zoology. The purpose of this course is to give a comprehensive survey of the animal world, to familiarize the student with the habits and structure of animals. Lectures are given upon typical forms in the different classes. Critical laboratory work is done upon the types discussed so far as practicable. One hour of recitation, four hours of laboratory. Elective to all who have completed Course I.

Throughout the year, three hours.

Given in 1904-5.

COURSE III.—Botany. A course in Botany similar to the one in Zoology. It is devoted to a study of all of the groups of the plant world, discussing their essential characteristics and relationships. The third term will be given to advanced work in systematic Botany. One hour of recitation, four hours of laboratory. Elective to all who have completed Course I.

Throughout the year, three hours.

Given in 1903-4.

COURSE IV.—Advanced Biology. Laboratory work and occasional lectures. The first part of the year is devoted to Vertebrate Histology with special attention to microscopic technique. This work is followed by a critical course in Embryology based chiefly upon the fish, frog, and chick. Elective to all who have completed Courses I. and II.

Throughout the year, four hours.

Additional Courses. — Additional courses will be offered, subject to certain limitations, when there is sufficient demand for the work.

Geology.

COURSE I. — General Geology. The fall term is devoted to the study of structural and dynamical Geology as illustrated by the region about Meadville. The winter term is devoted to the study of historical Geology and Paleontology, chiefly the history and stratigraphy of the North American continent. The laboratory work consists of a study of typical fossils. Three hours of

recitation, two of field or laboratory work. Open only to students who have completed their two years of required science.

Fall and Winter terms, four hours.

Chemistry.

The courses in this department are planned chiefly for a cultural training. The aim is to give the student a correct idea of the method of reaching scientific results in general and at the same time to lead to independent research both for mental discipline and for the acquirement of real knowledge of the subject. The practical work in the laboratories is emphasized and forms a large part of each course.

COURSE I.—Inorganic Chemistry. The principles of the science in connection with a study of the more important elements and compounds are given in this course. Practice in the writing of chemical equations and in the solution of chemical problems is emphasized. The lectures are illustrated by experiments which are, as far as practicable, repeated by the students in the laboratory; lectures and recitations two hours a week; laboratory work two hours a week.

Throughout the year, three hours.

COURSE II.—Qualitative Analysis. Special attention is given in this course to the analytical reactions of each one of the more common inorganic bases and acids. The more intimate knowledge of the elements and their compounds thus gained enables the student to generalize and classify chemical phenomena. Thorough practice in the separation of metals and acids from each other in unknown liquid and solid mixtures and in the preparation of minerals for analysis is given. Laboratory and lectures six hours a week throughout the year. Elective for students who have completed Course I.

Throughout the year, three hours.

Additional Courses. An additional course in quantitative analysis will be offered.

Engineering.

The instruction in this department covers the technical subjects that lie at the basis of engineering work. Constant use is made of instruments and much of the work consists of actual field work. The courses are open only to students in the Civil Engineering Course.

COURSE I.—Surveying, with level, transit, and compass. Methods of determining areas; laying out and dividing land; plotting and topographical drawing.

Spring term, four hours.

COURSE II.—Highway Engineering. The approved methods of constructing Macadam, Telford, gravel, and earth roads; wood, stone, brick, and asphalt pavement for cities, and the methods of maintaining country roads and city pavements.

Winter term, two hours.

Given in 1903-4.

COURSE III.—Civil Engineering. This course is designed to make the student familiar with the strength and qualities of materials used in engineering structures, with masonry and foundations and with the construction and maintenance of roads and railroads.

Spring term, four hours.

Given in 1903-4.

COURSE IV.—Railroad Engineering. This course includes a reconnoissance, preliminary and location surveys and estimates for a line of about two miles through a country as difficult as is ordinarily encountered. Plots and working drawings.

Since this course consists largely of field work, the members of the class must be careful to arrange their studies in such a way as to leave their afternoons free for such practical work.

Fall term, four hours.

Given in 1903-4.

COURSE V.—Bridges and Roofs. Including analytical and graphical determination of the stresses in bridges and roofs, together with a study of actual structures.

Winter and Spring terms, four hours.

Given in 1904-5.

English Bible.

The work in this department is intended to open to the student the rich stores of literature contained in the Bible; to familiarize the student with the history of the Hebrew people, their civilization, and their influence on the world; and to lead to the critical study of the spirit and form of Hebrew literature as it is shown in the English version. The courses do not touch questions of doctrine or belief. The English Bible is a great monument of our literature and as the source of our knowledge of one of the great civilizations of the world can not be wholly neglected by the student. It is expected that the work of this department will be considerably expanded in the near future.

COURSE I. — **An Introduction** to the English Bible, history of the various translations and their bases; examination of some of the literary forms in prose and poetry; an outline of the history of the Hebrew people. The course is designed as an introduction to the more elaborate following courses. It forms a part of the course in English I., and as such is required of all students.

Fall term, four hours.

COURSE II. — **Hebrew History** from the Exodus to the coming of Christ. All available sources are studied for the history. Text-book work, examination of the Bible narrative, lectures, preparation and discussion of special topics.

Winter and Spring terms, three hours.

COURSE III. — **Hebrew Literature** as revealed in the English Bible. A study of Hebrew prose and poetry, their characteristics and general style. The last part of the year is devoted to a close study of some of the minor prophets, for their literary value and for the light they throw on Hebrew life and character.

Winter and Spring terms, three hours.

English Language and Literature.

The aim of this department is to make the student as familiar as may be with English. The rhetorical courses are designed to cultivate effective expression of thought and intelligent appreciation of language. These powers are fundamental to success in every department of college work. The courses in the history of the language and of the literature lay stress upon the development of each, and are accompanied by extensive readings to illustrate the successive stages. Other courses are given which concentrate attention upon a single period or a group of writers in order to train the student in methods of careful literary study. The periods covered in this advanced work are changed from time to time.

COURSE I.—English Bible as literature. This work is described under English Bible I.

Elocution. Two hours weekly during the Winter and Spring terms are devoted to Course I. in Elocution.

Practical Rhetoric. During the Winter and Spring terms two hours of recitation, or the equivalent of laboratory work, are devoted to this subject. The aim is constructive rather than critical or scientific. Frequent short compositions, impromptu or prearranged; longer essays at stated times. The order of study is the Whole Composition, the Paragraph, the Sentence, Diction.

Throughout the year, four hours.

COURSE II.—A. Advanced Rhetoric.—B. Elements of English Literature.

A. A somewhat detailed study of the forms of prose discourse, their structure and their style. The method of study is both critical and constructive.

B. The course includes (1) a sketch of the History of English Literature; (2) class readings of typical English poems (including one play of Shakspere), accompanied by class discus-

sions and lectures by the instructor; (3) private readings and written reports.

Throughout the year, three hours.

COURSE III.—A careful study of one period of English literature—its historic setting, its principal writers and their works, the growth or decay of literature within its bounds.

A. The Victorian Period: Carlyle, Ruskin, Arnold, Tennyson, Browning.

Given in 1903-4.

B. English Poetry: Burns, Wordsworth, Coleridge, Scott, Shelley, Keats.

Given in 1904-5.

Elective for those who have completed Course II.

Throughout the year, three hours.

COURSE IV.—Principles of Literary Criticism. Consideration of the essential elements of literature, and analysis of various literary forms. Extensive illustrative readings followed by class discussions or individual reports.

Fall term, two hours.

Given in 1904-5.

COURSE V.—American Literature. Outlines of its development. Lectures upon representative authors. Study of masterpieces.

Winter and Spring terms, two hours.

Given in 1904-5.

COURSE VI.—Prose Fiction. The novel, the romance, and the short story. Studies in the structure and significance of these popular forms of modern English fiction.

Fall term, two hours.

Given in 1903-4.

COURSE VII.—Shakspere. Analytic and interpretative studies of five plays of Shakspere—*As You Like It, Hamlet, King Lear, Antony and Cleopatra, The Tempest.* A critical reading of Dowden's *Shakspere Primer* will be required in connection with this course.

Winter and Spring terms, two hours.

Given in 1903-4.

Courses IV. and V. may be elected separately, but together fill out a year. The same is true of Courses VI. and VII. Elective only for those who have completed Course III., and for a limited number of those who have completed Course II.

Expression and Oratory.

The work in this department aims to cover the essential principles of expression with their application, not only to public speaking, but also to every day conversation; to enable the student to secure a correct and refined pronunciation of the English tongue—a distinct utterance, a flexible and melodious voice, and pleasing as well as natural intonations. Since many voices differ in physical structure, it has been found necessary to adapt the work to individual needs, each member of the class receiving special attention in correction of mannerisms and defects. Individuality is considered of the first importance, and the training is not only for a better expression of the thoughts of others, but also to help the student to a clear interpretation of his own impressions.

COURSE I.—Vocal Culture. Thorough drill in the pronunciation of the vowel sounds, articulation, emphasis. Expression. Practice to overcome indistinctness and mannerisms and to secure a pleasing and natural rendition of narrative, descriptive and didactic styles. This course forms a part of English I.

Winter and Spring terms, two hours.

COURSE II.—Interpretation of more difficult selections of prose and poetry, a careful study of the masterpieces of English and American orators. Gesture as power in expression.

Throughout the year, two hours.

COURSE III.—A study to secure intelligent and forcible expression of oratorical thought, training in imaginative literature, creative gesture; study of Hamlet, Macbeth, or Lear.

Throughout the year, two hours.

COURSE IV.—This course is intended for young men who intend to enter the ministry. Careful attention is paid to extemporaneous speaking, Bible reading, and hymn reading.

Throughout the year, one hour.

Course I. is required of all students. Students in the English and Modern Language course may elect a total of twenty addi-

tional hours, in either class or private work; other students may elect a total of twelve hours additional.

For Courses III. and IV. an additional fee of $5.00 per term-hour is charged.

French Language and Literature.

In the teaching of Modern Languages no single method is exclusively pursued. An accurate pronunciation in accordance with established phonetic principles is insisted upon, and abundant conversational exercises are carried on in all classes with a view to familiarizing the student with the spoken language. A certain amount of prose composition, designed to afford a more intimate knowledge of the grammatical and syntactical structure of French, is required in all courses. For the more advanced classes frequent exercises in sight-reading and dictation are assigned, and in the last year the instructor lectures in the vernacular upon some phase of literature.

The department aims especially to aid the student to an appreciative interest in French culture, and incidentally to furnish such a knowledge of the history, geography, and social and political condition of these countries as goes to broaden the intellectual horizon. The relationship of English to French is carefully pointed out, and special emphasis is placed upon the disciplinary value to be derived from linguistic study.

COURSE I.—Fraser and Squair's French Grammar throughout the year. Super's French Reader or its equivalent. One short story, as Mairet's La Tache du Petit Pierre.

Throughout the year, four hours.

COURSE II.—Conversation, composition, and extensive reading of nineteenth century literature.

Throughout the year, four hours.

COURSE III.—Conversation, composition, and the study of representative authors and literary movements prior to the nineteenth century. In the last term a survey of French literary history is given by the instructor in French.

Throughout the year, four hours.

Courses II. and III. are given in alternate years. Only three hours credit, however, will be allowed those taking either as a third year course.

German Language and Literature.

The aims and methods of this department are essentially the same as for the department of French, as detailed above.

COURSE I.—Joynes-Meissner Grammar; short, easy stories, like Storm's *Immensee* for translation.

Throughout the year, four hours.

COURSE II.—Grammar work continued; Modern Prose Fiction with one or more Classic Dramas.

Throughout the year, four hours.

COURSE III.—German Composition; Classic plays. Extensive readings on which is based conversation.

Throughout the year, three hours.

COURSE IV.—Composition, rapid reading, conversation, and literary study of writers of the first rank.

Throughout the year, three hours.

This course is alternated with Course III. in successive years.

Graphics.

The work in this department is eminently practical. The actual needs of engineers are kept in mind, and the work is adapted thereto. With the exception of IA the courses are open only to students in the Civil Engineering Course.

COURSE I.—**Free Hand Drawing.** Elementary drawing, including a thorough training of the eye and hand in outline drawing, shading, and lettering.

Fall term, four hours.

COURSE IA.—Scientific Drawing. Open only to students in the Latin-Scientific Course. Has special reference to the accurate representation of scientific forms.

Throughout the year, one hour.

COURSE II.—Mechanical Drawing. This includes the study of the instruments and materials used, the methods of caring for them, projection drawing, isometrical drawing, cabinet drawing, and the principles of shading and tinting.

Winter term, four hours.

COURSE III.—Descriptive Geometry, as applied to the representation by projection to all geometrical magnitudes, the intersections and tangencies of developable, double curved, and warped surfaces. Spherical projections, shades, shadows, and linear perspective.

Throughout the year, four hours.

COURSE IV.—Machine Drawing is intended as an exercise in mechanical drawing and consists of copying working drawings, tracing and blue printing; making working drawings from parts of machines and from models.

Fall term, three hours.

COURSE V.—Architectural Drawing. Working drawings of a frame building.

Winter term, two hours.

Greek Language and Literature.

The aim of the department is to lead the student to the acquisition of a living knowledge of the Greek language as an introduction to a practical acquaintance with Greek life and thought. It is believed that by careful and accurate work in the first years of the language the student can gain such knowledge as will enable him to read widely and independently. The courses laid down are such as are thought to be best adapted to that end. They are not invariably followed, but may be altered as the needs and tastes of the class make expedient. The work is varied, and an attempt is made to give a view of all departments of the liter-

ature. The department possesses a small collection of casts of antique sculpture, painted vases and other antiquities, and about a thousand photographs.

A voluntary class is formed each year for the purpose of special drill in sight reading.

COURSE I.—Homer. *The Iliad* or *The Odyssey.* Detailed study of two or three books and rapid reading of as much more as the time allows. This rapid reading of the Homeric poems as literature is made the basis of the study of early Greek life and civilization.

One hour a week is devoted to private reading in Attic prose and composition based thereon. The aim is to develop a vocabulary and an accurate knowledge of Greek Syntax.

Throughout the year, four hours.

COURSE II.—Lysias. *Selected orations.* Study of Attic Legal Antiquities. Selections from Aristotle's Constitution of Athens are read as collateral work.

Plato.—*Apology* and *Crito* and selections from *Phaedo.* Outline of Greek Philosophy.

Greek Literature, text book and lectures. Assigned readings on special topics in Greek history and literature. Reading at sight.

Throughout the year, three hours.

COURSE III.—A. Greek Drama. Detailed study of two plays and rapid reading of several others. Usually the following will be read: Aeschylus' *Prometheus Bound*, Sophocles' *Oedipus Tyrannus*, Euripides' *Medea*, and Aristophanes' *The Frogs.* Individual investigation of special topics. The course is made not only a study of the rise and development of the Greek Drama, but also a study of literary evolution.

Throughout the year, three hours.

B. Greek Oratory.—Andocides, Isocrates, Demosthenes. The history and politics and the public and private antiquities of the times. Lectures and assigned readings in Greek, English, and German.

Throughout the year, three hours.

One of these courses is given each year. Open to all who have completed Course II. In 1902-3 A was given.

COURSE IV.—Classical Archaeology. Lectures on Architecture, Vase Painting, and Sculpture, illustrated with casts, photographs, and drawings. Open to those who have completed Course I., and under some limitations may be elected by students having no knowledge of Greek.

Throughout the year, two hours.

Given in 1903-4.

COURSE V.—Greek Testament. A minute and critical study of a portion of the New Testament to insure a familiar and accurate knowledge of vocabulary, syntax, and idioms, followed by more rapid reading to develop ease and rapidity in grasping the thought of the original. The purpose of the course is to lay the foundation for exegetical work. Open to all who have completed Course II.

Throughout the year, two hours.

Given in 1904-5.

COURSE VI.—Greek Literature. A careful survey of the field from Homer to the Roman Period. One hour a week is devoted to lectures and text-book work; one hour is given to critical readings in English translations and two hours to readings in Greek. Open to all who have completed Course II.

Throughout the year, four hours.

Given in 1904-5.

COURSE VII.—Greek Literature in English. This course consists of the lectures, text-book work and English readings of Course VI. It may be elected by students having no knowledge of Greek.

Throughout the year, two hours.

Given in 1904-5.

Hebrew.

A year's work in Hebrew is open to candidates for the Christian ministry. It is believed that the student who elects this course and that in Greek Testament—Greek V.—can by some private study easily fit himself to enter upon the second year in Theological Seminary.

COURSE I.—Bissell's Hebrew Grammar, completed. Twelve or more chapters in Genesis read.

Throughout the year, four hours.

This course is given only in alternate years. It will be given during the year 1903-4, if elected by a sufficient number.

History.

Courses are offered in history throughout the Sophomore, Junior, and Senior years. The aim is to give to the student such a knowledge of the facts and principles of history as is essential to a liberal education and as will serve as a preparation for graduate studies or for the study of law and journalism. The courses offered are confined to the mediæval and modern periods. The studies in mediæval history are preceded by a brief review of ancient history. Instruction is given by means of lectures, text-books, essays, oral and written reports on assigned readings in standard authorities.

COURSE I.—Outlines of European History from 375 A. D. to the French Revolution. This course continues throughout the year, and is required for admission to Courses II. and III. The work of the first half of the year is devoted to the mediæval institutions and is based on Emerton's Introduction to the Middle Ages and Mediæval Europe. Required readings are assigned in Fisher's History of the Christian Church and Adam's Civilization of the Middle Ages. The work of the last half of the year is based on Lodge's Modern Europe. Required readings are assigned in standard authorities.

Throughout the year, three hours.

COURSE II.—The Renaissance and the Reformation. Lectures and text-book. The text-book work is based on Symond's A Short History of the Renaissance and Hausser's The Period of the Reformation, 1517-1648. This course will be given in alternate years with Course III.

Throughout the year, three hours.

Given in 1903-4.

COURSE III.—The French Revolution and Europe during the Nineteenth Century. The first half of the year is devoted to the French Revolution and the Napoleonic Regime. Lectures and text-book. The text-book work is based on H. Morse

Stephen's European History, 1789-1815, and Rose's The Revolutionary and Napoleonic Era. The last half of the year is devoted to a study of England, France, Germany, and Italy since the Congress of Vienna. Fyffe's Modern Europe is used as a basis. Lectures and reports by students on assigned readings in standard authorities.

Throughout the year, three hours.

Given in 1904-5.

COURSE IV.—History of England from Teutonic origins to the Nineteenth Century. Lectures and text-book. The text-book work is based on Gardner's Students' History and Green's Short History of the English People, and references are required in the constitutional histories of Stubbs, Hallam, and Taswell-Langmead. This course alternates with Course V.

Throughout the year, two hours.

Given in 1904-5.

COURSE V.—The Political and Constitutional History of the United States, from 1781 to 1861. This course continues throughout the Senior year. The sources are extensively used as found in the government publications, the writings and addresses of statesmen, and the contemporary interpretation of national affairs. The text-book work is taken from Fiske, Walker, Hart, and Wilson. Lectures and reports by students on assigned readings in Von Holst, Schouler, McMaster, Rhodes, and the American Statesmen series.

Throughout the year, two hours.

Given in 1903-4.

Latin Language and Literature.

The courses in the Latin department are intended to direct the student to a systematic study of the language and its development; to acquaint him through a varied reading of the best authors with the leading features of the literature, and to make him familiar with the main facts of Roman life and civilization. Technical Grammar and Composition are studied only in so far as they contribute to the comprehension of the language.

The instruction is given by means of recitations

supplemented by lectures, and, in the elective courses, by individual research.

COURSE I.—Cicero, *De Senectute,* with selections from *De Amicitia* for rapid and sight reading; Livy, Books XXI-XXII; Velleius Paterculus, Book II. Weekly exercises in prose composition based on the texts read.

This course includes a detailed review of Latin case structure and syntax, and a specific effort is made to teach right habits of reading and translation. In connection with Livy is made a careful study of the geography of Spain and Italy and of the history of Rome during the Second Punic War. Attention is also directed to the literary characteristics of Livy and of his age.

Throughout the year, four hours.

COURSE II.—Horace, selected *Odes, Epodes, Satires,* and *Epistles;* Plautus, one play; Terence, one play.

The more common metrical structures are studied so that the Latin can be read with ease. Especial attention is directed to Horace's literary and political life and to as much of the history of the period as sheds light on the subject matter. In connection with the translation of Plautus and Terence, the course includes lectures on the origin and development of comedy in Rome and on the Roman Theatre. The plays are also made a basis for the investigation of syntactical problems.

Throughout the year, three hours.

COURSE III.—Tacitus, *Annals* Books I-II; Letters of Pliny and Cicero; Quintilian, *Institutiones* X.

The character of Tiberius and the upbuilding of the principate are studied by collateral readings from Suetonius and Velleius Paterculus. The letters of Cicero and Pliny are used as a basis for studies in Roman private life. In connection with Quintilian is taken up the origin of Roman literary forms.

This course alternates with Course IV. Open to those who have completed Course II.

Throughout the year, three hours.

Given in 1904-5.

COURSE IV.—History of Latin Literature. Lectures are given, alternating with illustrative readings in both Latin and English, from various authors studied. Mackail's *Latin Literature* is used, with assigned work in Cruttwell and Teuffel.

This course alternates with Course III. Open to those who have completed Course II.

Throughout the year, four hours.

Given in 1903-4.

COURSE V.—Latin Literature in English. This course consists of the lectures, text-book work, and English readings of Course IV. It may be elected by students of any course.

Throughout the year, two hours.

Given in 1903-4.

COURSE VI.—Roman Philosophy. Cicero, *Tusculan Disputations,* Book I; Lucretius, *De Rerum Natura,* Books I, III, V.

The purpose of this course is to give a general knowledge of the whole field of ancient philosophy, with a careful study of the Stoic and Epicurean systems. Lectures are given, supplementing Mayor's *Ancient Philosophy* and Zeller's *Stoics, Epicureans, and Sceptics.*

This course alternates with Course VII. Open to those who have completed Course II.

Throughout the year, two hours.

Given in 1903-4.

COURSE VII.—Introduction to Latin Epigraphy; Roman Topography.

In Epigraphy, lectures and exercises are given, based on Egbert's Latin Inscriptions. During the latter part of the year, a study of the topography, architecture, and monuments of Rome is made.

This course alternates with Course VI. Open to those who have completed Course II.

Throughout the year, two hours.

Given in 1904-5.

Mathematics.

Extended courses in pure and applied mathematics are offered, the work done being such as will be of the greatest value in mental discipline, and in the application of the subject to Science and Engineering.

COURSE I.—Algebra. The Binomial Theorem, Variables and Limits, Series, Determinants, Theory of Equations, Logarithms.

Geometry.—Conic Sections.

Fall term, four hours.

Trigonometry.—Functions of Acute Angles, the Right Triangle, Goniometry, the Oblique Triangle.

Winter term, four hours.

Trigonometry, the right Spherical Triangle, the Oblique Spherical Triangle, Applications of Spherical Trigonometry.

Spring term, four hours.

COURSE II.—Analytic Geometry. Construction and Discussion of Equations, the Straight Line, Circle, Ellipse, Parabola, and Hyperbola. General Equation of the Conic Section.

Fall term, three hours.

Construction of Conics from their Equations, Tangents and Normals, Conics referred to Oblique Axes, Higher Plane Curves.

Differential Calculus.—Introductory Theorems, Differentiation of Explicit Functions, Transcendental Functions, Successive Differentiation, Development of Continuous Functions.

Winter term, three hours.

Evolution of Illusory Forms, Maxima and Minima, Functions of Two or More Variables.

Integral Calculus.—Type Forms, General Methods of Transformation, Successive Integration, the Constant of Integration, Geometrical Applications.

Spring term, three hours.

COURSE III.—An advanced course in Higher Mathematics, taking up such subjects as are agreed upon by the class and the instructor.

Throughout the year, two hours.

Philosophy.

The aim of this department is to secure for the student habits of philosophic thought, and to enable him to come to a right knowledge of himself and his relations to nature, to his fellow-men, and to God. Text-books are used only as guides. Emphasis is put on the necessity of independent investigation and independent thought.

COURSE I. — **Psychology.** A general introduction to the subject. The text-book, Sully's Outlines of Psychology, is supplemented by informal lectures, assigned readings and papers on special topics.

Fall term, four hours.

COURSE II. — **Ethics.** A brief survey of the history of ethical thought is followed by a critical examination of the chief ethical systems of modern times with the view of arriving at the really valid principles that underlie human conduct. These principles are then critically applied to the various institutions and natural relations of human life.

Winter term, four hours.

COURSE III. — **Christian Evidences.** The true nature of Christianity is defined, its relation to philosophy and to other religious systems is considered at some length, and modern arguments against it are refuted.

Spring term, four hours.

COURSE IV. — **History of Philosophy.** A study of the chief philosophers and philosophic systems of ancient and modern times. Weber's History of Philosophy is used as a text-book.

Fall term, four hours.

COURSE V. — **Theory of Thought and Knowledge.** An inquiry into the general nature and conditions of thought, a study of proof and the most important logical fallacies, and a consideration of philosophic scepticism, of realism and idealism and of apriorism and empiricism.

Winter term, four hours.

COURSE VI. — **Philosophy of Religion.** Chief attention is here given to the idea of God. The traditional arguments for the existence of God are critically examined and the attempt is then made to show that the theistic conception of the world is a necessary postulate of reason and that all atheistic systems are suicidal.

Spring term, four hours.

Physics and Astronomy.

The leading idea in the instruction given in these subjects is to prepare the student for independent research, upon the theory that such method affords the highest mental discipline and the most satisfactory

practical knowledge. Each student, furnished with sufficient material material and apparatus to enable him to do so, will pursue his own investigations under such guidance as will secure precision in method and accuracy in results. Illustrated lectures will frequently be given to make the path clear and the labor interesting and successful.

The College has complete facilities for obaining a thorough elementary knowledge of these branches. The costly and splendid apparatus, kept up to the times by occasional additions, makes these studies unusually attractive and satisfactory.

Physics.

COURSE I.—Class work, illustrated lectures, experiments. Fall term, Mechanics; Winter term, Electricity; Spring term, Hydraulics, Heat, Light, and Sound. Open only to those who have completed Mathematics I.

Throughout the year, three hours.

COURSE II.—Advanced work in experimentation. All branches of the subject are closely studied by original problems and investigation. Open only to those who have completed Mathematics II.

Throughout the year, three hours.

Astronomy.

COURSE I.—Astronomy. A general introduction to the subject by means of text-book and lectures.

Spring term, four hours.

COURSE II.—The physics and mathematics of Astronomy; practice in the use of astronomical instruments and the taking of observations. Open to those who have completed Course I. and have had the required mathematical training.

Fall and Winter terms, three hours.

The department has a large number of lantern slides for illustrating lectures. The Newton Observatory is thoroughly equipped for practical work and students will be trained in the use of the equatorial telescope and the transit.

Social and Political Science.

In Social Science the main attention is given to the study of the development of economic life and institutions, American conditions being specifically analyzed. Students are encouraged to individual research, leading to possible future specialization in the subject. Lectures and comparative examination of various authorities is the general method of instruction.

One year of History is required before students are admitted to the work in Political Science.

Political Science.

COURSE I.—Comparative Politics. This course is historical as well as comparative in method. It begins with a study of the state, its origin, development, forms and ends, and an examination into the governments of ancient Greece and Rome and of mediæval times. Then follows a study of the development and a comparison of the present constitutions of England, France, Germany, and the United States. The work is based on Wilson's The State, and Burgess's Political Science and Comparative Constitutional Law.

Fall and Winter terms, three hours.

COURSE II.—International Law. This alternates with Course III. The text-book is that of General G. B. Davis, the required work of the United States service. Special examination of the Treaties and Conventions and diplomatic history of the United States is made.

Spring term, three hours.

Given in 1903-4.

COURSE III.—Municipal Politics. This study is presented in the Spring term in harmony with the civic progress of the nation. It is based on comparative texts and is supplemented by study of State municipal legislation and the charters of leading cities.

Spring term, three hours.

Given in 1904-5.

COURSE IV.—Constitutional Law of the United States. The purpose of this course is to give to those students who cannot take the extended work in the history of the United States some

knowledge of the general principles of our constitutional law. The sources of the national instrument are examined and the development of its chief powers is traced. The work is based on the texts of Cooley, Storey and Von Holst, and special attention is given to a few leading cases for illustration.

Fall term, two hours.

Given in 1904-5.

Economics.

COURSE I.—This course continues throughout the year, beginning with the introductory text of Bullock and continuing with Hadley. Assigned readings are given in Marshall's Principles of Economics and the Austrian authorities. Detailed study is made of specific fields as trusts, finance, tariff, and banking. The Spring term is given to an examination of social conditions, Wright's Practical Sociology being used as an outline.

Throughout the year, three hours.

COURSE II.—Economic Theories. This course is offered to a limited number of those who have completed Course I. It consists of a survey of the leading principles of the science as propounded in Smith, Ricardo, Mill, Jevons, Senior, Menger, Weser, Bohm Bawerk, Walker, and Clark.

Winter term, two hours.

Spanish Language.

A year's work is offered in Spanish, giving an introduction to the language and its literature sufficient for further independent work if the student so desires.

COURSE I.—First term, Knapp's Spanish Grammar; second and third terms, Knapp's Grammar and Velasquez's Spanish Reader.

Throughout the year, four hours.

Not given in 1903-4.

Physical Training.

All students are required to take instruction in the gymnasium. Regular class work is given under the supervision of competent instructors.

For Young Men.—The object of this department is to give the student growth and increase of strength, that of the mind in direct proportion to that of the body; to furnish proper instruction in hygiene; to provide health, strength, and symmetrical development. These objects are accomplished by regular class exercises in the gymnasium during the fall and winter, and on the field in the spring, and by periods of optional work after class hours. Physical measurements and strength tests of all students are taken upon entrance, at the close of the college year, and at such intervals as seem necessary. This forms the basis of comparison of the student's condition and needs, and determines the character and amount of exercise necessary to overcome marked deficiencies, irregular development, or such deformities as are amenable to physical exercise.

Students will receive personal advice in reference to habits of life, exercise, study, and recreation; also suggestions pertaining to personal hygiene, etc.

The work is designed to be progressive and is divided accordingly.

Fall Term.—Swedish work, military gymnastics, elementary club swinging, wand and dumb bell drills, principles of heavy gymnastics, development of college gymnasium team; gymnastic exhibition at close of term.

Winter Term.—Continuation of former work, advanced club swinging, heavy gymnastics, indoor athletics, gymnastic games; basket ball; inter-class indoor athletic meet, and inter-class basket ball at close of term.

Spring Term.—Continuation of former work, track and field athletics; tennis, base ball, outdoor gymnastic and athletic games; inter-class base ball and inter-class track and field athletic meet in May or June. All students are required to take the light gymnastics, which are of such a character as to meet the average

needs and not over-tax the strength of any student who is in a physical condition to undertake college work.

NOTE.—For the welfare of the students it is required that all who take gymnasium work, or desire to use the privileges of the gymnasium, should first submit to a physical examination by the Director.

An examination and measurement is offered each student yearly and a record of the results is kept for reference.

FOR YOUNG WOMEN.—The aim of the work is to acquire a symmetrical development of the body as a basis for health and grace. The training is based upon Delsarte Philosophy of Expression, and the Swedish and German systems of free movements and light gymnastics.

The general work includes Indian club and dumbbell exercises, flexing exercises to overcome stiffness, exercises to develop control of the muscles, and all devices in training that secure freedom of bodily action.

Required Work

In the Various Courses of Study.

For graduation in any course all work specified as required must be completed, and in addition thereto work selected from the general list of electives sufficient to make a total of not less than one hundred eighty term-hours. "Term-hour" signifies one hour recitation weekly for one term.

Sixteen recitations a week is the regular number, but the Registrar may assign seventeen. Application for a larger number must be approved by the Registration Committee.

In the following tables Arabic numerals denote the number of hour recitations per week—i. e., the number of term-hours. Roman numerals refer to the courses of instruction detailed on pages 21 to 44, where may be found full description of the character of the work.

Notes on the Required Work.

NOTE I.—In the Classical, Latin and Modern Language, and English and Modern Language Courses, two years of science are required. Choice of two subjects must be made from Biology I., Chemistry I., Physics I.

NOTE II.—In the Latin-Scientific course two of the following subjects must be taken: Biology II. (or III.), Chemistry II., Physics II.

NOTE III.—Students that offer German instead of French for admission will take French I. and II. instead of German I. and II. as scheduled.

NOTE IV.—Students in the Civil Engineering Course who do not care to take the higher technical work may take Biology II. or III. in place of such work in the Junior year and Philosophy in place of such work in the Senior year.

Classical Course.

FRESHMAN YEAR.	FALL TERM.	WINTER TERM.	SPRING TERM.
Latin I	4	4	4
Greek I	4	4	4
Mathematics I	4	4	4
English I	4	4	4
SOPHOMORE YEAR.			
Latin II	3	3	3
Greek II	3	3	3
English II	3	3	3
German I	4	4	4
Science [See Note I., page 45]	3	3	3
JUNIOR YEAR.			
History I	3	3	3
Philosophy I., II., III	4	4	4
Science [See Note I., page 45]	3	3	3
Elective	4	4	4
SENIOR YEAR.			
Elective	14	14	14

Latin-Scientific Course.

FRESHMAN YEAR.	FALL TERM.	WINTER TERM.	SPRING TERM.
Latin I	4	4	4
Mathematics I	4	4	4
Biology I	3	3	3
English I	4	4	4
Graphics I*a*	1	1	1
SOPHOMORE YEAR.			
Mathematics II	3	3	3
English II	3	3	3
Chemistry I	3	3	3
German I	4	4	4
Science [See Note II., page 45]	3	3	3
JUNIOR YEAR.			
Physics I	3	3	3
Geology I	4	4	.
Astronomy I	.	.	4
Science [See Note II., page 45]	3	3	3
Philosophy I., II., III	4	4	4
SENIOR YEAR.			
Elective	14	14	14

Latin and Modern Language Course.

FRESHMAN YEAR.	FALL TERM.	WINTER TERM.	SPRING TERM.
Latin I	4	4	4
German I [See Note III., page 45]	4	4	4
Mathematics I	4	4	4
English I	4	4	4
SOPHOMORE YEAR.			
Latin II	3	3	3
German II [See Note III., page 45]	4	4	4
English II	3	3	3
History I	3	3	3
Science [See Note I., page 45]	3	3	3
JUNIOR YEAR.			
Philosophy I., II., III	4	4	4
Science [See Note I., page 45]	3	3	3
Elective	7	7	7
SENIOR YEAR.			
Elective	14	14	14

English and Modern Language Course.

FRESHMAN YEAR.	FALL TERM.	WINTER TERM.	SPRING TERM.
German I [See Note III., page 45]	4	4	4
French III	3	3	3
English I	4	4	4
Mathematics I	4	4	4
SOPHOMORE YEAR.			
German II [See Note III., page 45]	4	4	4
English II	3	3	3
Elocution II	2	2	2
History I	3	3	3
Science [See Note I., page 45]	3	3	3
JUNIOR YEAR.			
English III	3	3	3
History II. or III	3	3	3
Philosophy I., II., III	4	4	4
Science [See Note I., page 45]	3	3	3
Elective	2	2	2
SENIOR YEAR.			
Elective	15	15	15

Civil Engineering Course.

FRESHMAN YEAR.	FALL TERM.	WINTER TERM.	SPRING TERM.
Mathematics I	4	4	4
Graphics I., II	4	4	.
Engineering I	.	.	4
English I	4	4	4
German I	4	4	4
SOPHOMORE YEAR.			
Mathematics II	3	3	3
Graphics III	4	4	4
Chemistry I	3	3	3
English II	3	3	3
German II	4	4	4
JUNIOR YEAR.			
Graphics IV., V. [See Note IV., p. 45]	3	2	.
Engineering II., III. [See Note IV., page 45]	.	2	4
Chemistry II	3	3	3
Physics I	3	3	3
Geology	4	4	.
Astronomy I	.	.	4
SENIOR YEAR.			
Engineering IV., V. [See Note IV., page 45]	4	4	4
Physics II	3	3	3
Elective	7	6	6

List of Electives.

The following list of elective studies includes all subjects that are elective in any of the courses of study. Some of the subjects are required in one or more of the courses of study, but are elective in others. The list is open to students of all courses under the conditions named below. Each student will select from the list sufficient work to make, in connection with the required work of his course, not less than fourteen hours a week.

Conditions.

1. The student must be fully prepared for the work.
2. He must avoid all irreconcilable conflicts in hours.
3. So far as possible all required work below his rank must be completed before advanced electives are chosen. This rule may be waived in cases where it is necessary in order that the student may be ready for a particular line of work in the latter part of his course.
4. A subject once selected must be pursued to completion—or to the end of the year. Partial courses of instruction will not be counted in the one hundred eighty term-hours required for graduation.
5. The student must have a definite plan in the choice of his elective work.
6. The faculty reserves the right to disapprove choice of electives.

The Arabic numerals refer to the number of hour recitations per week; the Roman numerals refer to the detailed description of the courses of instruction found on pages 21 to 44.

SUBJECTS.	FALL TERM.	WINTER TERM.	SPRING TERM.
Astronomy I	.	.	4
Astronomy II	3	3	.
Biology I	3	3	3
Biology II	3	3	3
Biology III	3	3	3
Biology IV	4	4	4
Chemistry I	3	3	3
Chemistry II	3	3	3
Economics I	3	3	3
Economics II	.	2	.
Elocution II	2	2	2
Elocution III	2	2	2
Elocution IV	1	1	1
English III	3	3	3
English IV	2	.	.
English V	.	2	2
English VI	2	.	.
English VII	.	2	2
English Bible II	.	3	3
English Bible III	.	3	3
French I	4	4	4
French II	4	4	4
French III	3	3	3
Geology	4	4	.
German II	4	4	4
German III	3	3	3
German IV	3	3	3

SUBJECTS.	FALL TERM.	WINTER TERM.	SPRING TERM.
Greek III	3	3	3
Greek IV	2	2	2
Greek V	2	2	2
Greek VI	4	4	4
Greek VII	2	2	2
Hebrew	4	4	4
History I	3	3	3
History II	3	3	3
History III	3	3	3
History IV	2	2	2
History V	2	2	2
Latin II	3	3	3
Latin III	3	3	3
Latin IV	4	4	4
Latin V	2	2	2
Latin VI	2	2	2
Latin VII	2	2	2
Mathematics II	3	3	3
Mathematics III	2	2	2
Philosophy IV., V., VI	4	4	4
Physics I	3	3	3
Physics II	3	3	3
Political Science I	3	3	.
Political Science II	.	.	3
Political Science IV., III	2	.	3
Spanish	4	4	4

Equipment.

Apparatus.

The College possesses extensive cabinets of Mineralogy and Conchology, and complete Chemical, Physical and Biological apparatus of the most improved forms.

The apparatus comprises many distinct pieces, affording ample means of illustrating every branch of Physics and Chemistry now taught in collegiate institutions. Among the most expensive instruments are the following:

Compound Miscroscopes with accessories, manufactured by Zentmayer. Induction Coil, giving a twelve inch spark, by E. S. Richie & Co., and one giving a four inch spark. Instruments to illustrate the laws of undulations. Auzoux's largest Anatomical Models of the eye, ear, brain and larynx. Apparatus for reproducing Tyndall's experiments with heat. Three Polariscopes, with accessories. A Spectroscope with four prisms. Complete apparatus for projection, including a first-class Educational Lantern, Double Stereopticon, Electric Stereopticon, Oxy-Hydrogen Microscopes, Duboscq's apparatus for projecting polarized light. Friction Machine. A Holtz Electrical Machine. The most recent and approved Wheatstone Bridge and Resistance Box for electric measurements. A Phonograph. Two Dynamos and accessories. Recently the equipment has been increased by the addition of apparatus for wireless telegraphy, two excellent chemical balances, and an air pump with accessories. The College has also acquired a complete set of Crookes' tubes and also X-ray tubes of the most recent construction. The photographic outfit is the best that can be obtained.

The large telescope has a nine inch glass, made by

Brashear. A smaller instrument, with a seven and one-half inch glass, made by Alvin Clarke & Son, is also mounted and used for class purposes. The astronomical transit is a fine instrument from the hands of Stackpole Brothers. Two chronometers are in use, and an astronomical clock will soon be put in place, given in memory of Milton B. Goff, Ph.D., LL. D., formerly professor of Mathematics and Astronomy in the College.

In Mathematics and Engineering all necessary instruments for illustrating pure and applied Mathematics are provided.

Two Transits with Meridian Finder, a Prismatic Compass, two Sextants, Compass, 100-foot Chain, Levels, and other apparatus are in practical use.

The Biological equipment is kept thoroughly up to date by frequent additions.

Among the more important pieces of new apparatus may be mentioned a new Microtome, manufactured by R. Jung, Heidelberg, with the necessary accessories, including a Paraffine Bath; Dissecting Microscopes of a convenient though simple design; twelve Bausch and Lomb Compound Microscopes furnished with 1-8-inch, 2-3-inch, and 2-inch objectives. The Laboratory is equipped with the necessary glassware and chemicals for embryological and histological, as well as for more elementary work. Recently there have been added a number of Leuckart's charts, Botanical Models and Charts, and several skeletons of vertebrates.

Museum.

The Museum embraces several distinct collections of Minerals, Shells, Fossils, etc.

1. The Prescott Collection, comprising 2,200 specimens of Marine, Terrestrial, and Fresh Water Shells, and about 3,000 specimens of Minerals and Fossils, was collected and mounted by Dr. William Prescott.

2. The Haldeman Collection has 550 excellent and carefully labeled specimens of Minerals, and about 2,000 specimens of Shells, and was purchased by S. S. Haldeman.

3. The Alger Collection.—This collection, made by Francis Alger, contains 5,000 specimens of Minerals, remarkable for their beauty and variety. It embraces also a large number of duplicates, and a handsome cabinet of about 1,500 specimens of shells.

4. Cabinet of Lithology and Palaeontology.—This contains an entire series of the well known Ward Casts, and a very comprehensive and valuable collection of Fossils and Rocks, to which additions are being made.

5. Smithsonian Collection.—In addition to several valuable collections heretofore obtained from the Smithsonian Institution, there have been added over 500 specimens of Land, Marine and Fresh Water Shells from Panama, Vancouver's Island, and the West Indies, chiefly obtained by Prof. C. A. Adams and authentically labeled by H. Cumming and Dr. P. Carpenter, from the collection of D'Orbigny and Cumming.

6. Entomological Collection.—The Cabinet of insects embraces 3,000 species, carefully and accurately catalogued and classified. It was arranged by W. O. Currier, and donated by a friend of the College.

7. Natural History Collection.—In addition to the above named collections there are about 1,000 Zoological Specimens, including Birds, Reptiles, Fish and Marine Animals, which are constantly being increased in number by the exertion of the friends of the department.

These collections greatly increase the scientific advantages of the College and furnish special incentives to the study of Natural Science.

Library and Reading Room.

The College Library contains more than 16,000 volumes, many of them rare and valuable works. More than seventeen hundred volumes have been added the last year. Department libraries have been established and have attained considerable proportions. They are an important feature of the work in all of

the literary courses. Technical and reference books are being added as fast as possible. With the completion of the new library building and the contemplated instalment of a perfect modern equipment and system of administration, and with the intended extensive additions in books and periodicals, the library facilities will be of the highest character. The Reading Room provides for the students a wide range of periodical literature. Complete files of all the best magazines are continually kept on hand.

During the last year gifts have been received as follows: From the library of the late Rev. D. W. Wampler, of the Erie Conference, 121 volumes. From the library of the late Rev. W. C. Best, D. D., of the Philadelphia Conference, 210 volumes. From the library of the late Rev. J. W. Crawford, of the Erie Conference, 353 volumes. From the Rev. G. S. Richards, of New York, 100 volumes. From the library of the late Hon. Newton S. Pettis, of Meadville, 410 volumes. From Mr. Durbin Horne, of Pittsburg, 90 volumes, including a set of the Yale Bi-Centennial Publications. From Mr. Charles Fahr, of Meadville, a complete set of the Kürschner's Deutsche National-Literatur, 222 volumes; Brockhaus Conversations-Lexicon, 18 volumes.

The Free Public Library of Meadville excellently supplements the facilities of the College Library, particularly in the lines of general reference books and current fiction.

General Information.

College Fees.

All students pay an incidental fee of $15 a term, and a gymnasium fee of $2 a term.

In the Laboratories each student in Chemistry I. pays $2.50 a term for use of chemicals and apparatus, and in Chemistry II., $5. In Biology I., a fee of $1 a term is charged, in Biology II. and III. a fee of $2 a term, and in Biology IV. a fee of $3 a term is charged to cover the cost of material. In the second term of Geology a fee of $1 is charged.

Students in Scientific Drawing pay a fee of $1 per term.

Students in the Civil Engineering Course pay a fee of $5 in addition to the term fee.

Living Expenses of Young Men.

The most important item in the expenses of a student is the cost of living. Every effort has been made to reduce the living expenses as low as possible, and at the same time secure everything that is necessary for health and comfort.

The College does not provide room and boarding for young men, but will render all possible aid to students in securing comfortable homes. Good furnished rooms for two cost each occupant from fifty cents a week upward. This includes care and light.

The young men of the College board in clubs or in private families, the latter costing about one-third more than the former. The cost of good table board

is in this way reduced to from $2.00 to $2.50 per week. Provided the student have a room-mate, the estimate for the necessary expenses, based upon good club board, is as follows for a term of twelve weeks:

LOW.

Term fee	$15.00
Gymnasium fee	2.00
Room Rent, Fuel and Light	7.00
Table Board	24.00
Books	3.00
Total	$51.00

LIBERAL.

Term fee	$15.00
Gymnasium fee	2.00
Room Rent, Fuel and Light	12.00
Table Board	36.00
Books	7.00
Total	$72.00

Expenses other than those enumerated depend largely on a student's tastes and habits, and the College does not undertake to estimate them. For the items mentioned the figures given are exact. Few students will have occasion for spending more than $75 a term. This, of course, does not include traveling expenses, clothing, or luxuries. An economical student can live on $60 a term; indeed, each year several students spend less than this and yet live comfortably. The only caste in the College is based on good conduct and good work.

Living Expenses of Young Women.

HULINGS HALL.

Allegheny College is a co-educational institution. It furnishes to young women the highest educational advantages open to young men and also the best fea-

tures of a distinctively woman's college, among them a refined and comfortable home. In Hulings Hall it is aimed to furnish an ideal college home for young women. The Hall is in charge of a competent and accomplished Preceptress, who devotes her whole time to the interests of the home, and whose influence is constantly felt in the social, moral, and religious development of the young women under her charge.

Young women not living at home or with relatives are required to live in Hulings Hall. Applicants for admission to the Hall are reminded that the purpose of residence there is not social but educational. They are supposed to be young women of fixed principles and elevated aims. The regulations are not artificial or arbitrary, but such as are considered essential to the ends for which the Hall is maintained. All proper freedom is accorded, but the authorities of the College reserve the right to decide what proper freedom is. A copy of the Regulations for the government of the Hall will be furnished on application.

The rooms are furnished with beds, mattresses, pillows, chairs and tables. The rates including heat and light are as follows: In the main corridor, on the second floor, rooms are $30 each for one term; on the third floor, $25 each. In the rear corridor: second floor, $20; third floor, $15. Where two persons occupy a room the rate for each is one-half the above amount. Room rent is payable at the opening of each term. Rooms may be reserved in advance by the payment of a deposit of half the rate for the term. Table board is $35 a term.

Each young lady should bring with her the follow-

ing articles: sheets, pillow cases and bed covering, towels, napkins, knife, fork and spoons.

Aid to Students.

SCHOLARSHIPS.—The College has no scholarships, but it is able to grant aid of various sorts that serves the same purpose.

SELF-HELP.—Young men help themselves in several ways. About thirty of the present students are earning their expenses in whole or in part. Ten or twelve are employed in light work connected with the College or the boarding clubs. Some find in town opportunities for work of various kinds. Others are serving churches in the neighborhood of Meadville. It is the policy of the College to help students that help themselves.

THE LINDLEY ENDOWMENT.—By the will of the late Miss Lucy Lindley, of Meadville, the College received the sum of ten thousand dollars, the interest of which is used to assist students dependent upon their own efforts to obtain an education. Application for aid from this fund should be made to the President. It should be understood, however, that only a limited number of students can be aided in this way.

EDUCATIONAL SOCIETY LOANS.—Student who are members of the Methodist church, showing promise of usefulness in any form of Christian activity, may secure loans from the Educational Society on the recommendation of their home Quarterly Conference. These loans are without interest and need not be paid until two years after graduation. It is supposed by many that these loans are offered only to candidates

for the ministry. Such is not the case. They are offered to all needy and worthy students. The loans are made by the society on the recommendation of the faculty.

No aid from the above mentioned funds, or from any other source, is given to students who use tobacco.

A student having received aid from any of the College funds will be given a letter of dismissal to enter another college only after all such aid shall have been returned.

Candidates for the Ministry.

The College is not a theological seminary, nor does it profess to take the place of a theological seminary. It does help the student for the ministry to lay broad and strong foundations for special study in theology. In addition to the courses usually given in colleges, there are offered courses in the English Bible, New Testament Greek, and Hebrew.

Religious Culture.

The College was founded by Christian men for the promotion of Christian culture. It believes that education should always include, as its highest aim, the development of Christian character. It seeks to surround the student with such influences and helps as foster the religious life. Chapel services are held each morning and all students are required to be present. Regular attendance on Sunday mornings at some church, selected by the student or his parents, is also required. Prayer meetings are held Wednesday evening of each week. The results are manifest in the quickening and strengthening of many in the

religious life. Religious services, under the care of the Young Men's Christian Association of the College, are held on Monday evening of each week in their hall. On Sunday evening the Young Women's Christian Association holds its regular meeting in the parlor of Hulings Hall. The students' Christian Associations also conduct religious services weekly in several places in the city and surrounding region. In this way the students are brought into religious association and become familiar with various forms of religious activity.

The religious influence of the College is not in any sense sectarian, but Christian. On the rolls this year are representatives from sixteen Christian denominations.

The aim is to make the moral and religious life of the College such that the student will be under as helpful influences here in Meadville as he would be in his own Christian home.

The Weekly Holiday.

The weekly holiday is on Monday instead of Saturday.

This plan has been in use for several years, and is greatly preferred by teachers and students. It has obvious advantages and is particularly adapted to the wants of students in towns adjacent to Meadville—within forty or fifty miles—who desire to spend Sunday at home. The railroads furnish mileage tickets at reduced rates, and a deduction is made in most cases for absence from the boarding tables. The cost of spending Sunday at home is in this way made small. This plan is commended to the attention of parents

who may be so situated as to be able to avail themselves of its obvious advantages.

Literary Societies.

There are two Literary societies for young men—the Allegheny and the Philo-Franklin—and the Ossoli Society for young women. The societies have their respective halls, and libraries aggregating about 3,000 volumes. These societies render the College efficient service in the literary and forensic training of students, and the society friendships are invaluable to the members. While membership in a literary society is not required, it is earnestly recommended to every student.

Clubs.

The Classical Club, composed of the instructors in the classical department and advanced students to the number of about twenty-five, meets for the discussion of papers submitted by members on lines of classical investigation.

The Quill Club is an organization to encourage and to regulate publication in the interests of the College. The membership includes the editorial boards of the Allegheny Literary Monthly and of the Campus, a weekly newspaper, also college correspondents for the local press and for out of town papers.

Prizes.

In addition to essays and oration prizes offered by the literary societies, two prizes are open to competition by students of the College classes.

The Farson Oration Prize.—Mr. John Farson, of Chicago, furnishes a prize of fifty dollars, awarded

in March of each year, to the young man delivering the best oration. The winner of this prize represents the College in the Tri-State Oratorical League Contest held in May.

Class of Ninety Oration Prize.—The class of '90, which consisted of forty-two persons, has established a prize of forty-two dollars to be awarded annually to the young man or woman delivering the best oration at a contest held in the spring term.

Lectures.

In addition to the regular work of the departments special lectures are given from time to time by members of the faculty on a variety of subjects. Courses of lectures are also given by men outside the faculty. These lectures deal with a wide range of subjects and are of great service in supplementing the regular department work.

Music.

The Pennsylvania College of Music was established for the purpose of affording superior advantages for the study of Music in all its higher branches. The courses of study pursued are similar to those of the successful schools of music in Europe and America, and are calculated to make cultured, thoroughly competent and skillful musicians of the graduates; also to give them a system for their use when they in turn wish to become professional teachers. A catalogue giving full information as to the work done may be had on application to the Director.

The College of Music is so affiliated with the College that students in each may avail themselves of the ad-

vantages of the other. A limited amount of music is allowed as an elective in the English and Modern Language course.

Important Regulations.

Excuses for Absence.—For absence from town, necessitating absence from any college duties, a written excuse must be secured from the President, before the absence, if possible. No absence from class can be excused except on presentation to the instructor of this written excuse of the President.

When a special request is made to the President it is understood to be made to the Faculty. The proper form of such request is a written application for the desired excuse, or favor, and this written request should set forth plainly the reasons for it.

Examinations.—There are three examinations of classes during the year. The first is held on the last three days of the Fall term; the second on the last three days of the Winter term; the third begins a week previous to commencement.

A student failing to pass in a subject is entitled to a second examination, if he so desire, at a time to be arranged by the instructor. In case of a second failure or of neglect to apply for a second examination within two weeks of the opening of the next term, the study must be taken over in class.

Special Examinations.—Students desiring examinations in subjects not regularly taken in classes, are required to make application for the same to the Faculty. Permission to take such examination must be secured before preparation for it begins. A fee of $1

a term-hour is charged for such examination if granted.

MARRIED STUDENTS.—A student that marries after matriculation and before graduation thereby severs his relations with the College.

The Adviser System.

Each student on registering is assigned to some member of the Faculty, who serves throughout the year as a special counsellor on all matters in which the student finds the need of frank and friendly advice. The relation between adviser and student is intended to be perfectly fraternal, without restraint on either side.

Classification.

The classification of the Catalogue is made in February of the college year, and gives the class rank for the year.

In the Senior class are included those who have completed by February 1, not less than one hundred forty-six term-hours, of the one hundred eighty necessary for graduation.

In the Junior class are included those who have completed by February 1, not less than ninety-five term-hours.

In the Sophomore class are included those who have completed by February 1, not less than forty-three term-hours.

In the Freshman class are included all who have been admitted to the class during the year.

Graduation.

For graduation all the required work in some one course must be completed, and additional work, selected from the general list of electives, sufficient to make a total of not less than one hundred eighty term-hours.

Every candidate for graduation must present on or before April first of the Senior year an oration satisfactory to the Faculty. In the case of engineering students a thesis on some technical subject is required in place of an oration.

Degrees.

The degree of Bachelor of Arts is conferred upon those who complete in a satisfactory manner one of the three courses, Classical, Latin-Scientific, Latin and Modern Language.

The degree of Bachelor of Letters is conferred upon those who complete in a satisfactory manner the English and Modern Language Course.

The degree of Bachelor of Science is conferred upon those who complete in a satisfactory manner the Engineering Course.

The degree of Master of Arts may be conferred on Bachelors of Arts of this College who have completed a course of at least three years in length in an approved professional school.

Bachelors of Art of this College, or of another of equal rank, may pursue in residence work in not more than two distinct lines of study. On the completion of a full year's work, and the presentation of a satisfactory thesis, the degree of Master of Arts will be

conferred. Bachelors of Arts of this College may, by vote of the Faculty, be permitted to pursue this work in non-residence, but in that case at least two years must be devoted to it.

Every person receiving a degree from the College will pay a fee of five dollars for diploma.

Form of Bequest.

"I hereby give, devise, and bequeath to Allegheny College, at Meadville, Penn'a, the sum of———" (or such other property, real or personal, as may be described).

Register of Students.

The small capitals following the names indicate the course of study : C standing for Classical, S for Latin-Scientific, L for Latin and Modern Language, ML for English and Modern Language, and E for Civil Engineering.

Graduate Students.

Candidates for the Degree of Master of Arts.

McCLINTOCK, MARGUERITE BELLE, ... Meadville
A. B., Allegheny College.

MERCHANT, JESSIE, ... Meadville
A. B., Allegheny College.

SHADDUCK, MAUDE GERTRUDE, ... Meadville
A. B., Allegheny College.

Not Candidates for a Degree.

EDSON, EMMA, ... Meadville
A. B., Allegheny College.

WITTEN, JOHN LUTHER, ... Meadville
A. B., Morgan College.

Seniors.

ALCORN, ALICE M., S..... Titusville
ANDERSON, JAMES HOWARD, C..... Walkersville, W. Va.
BEMIS, MARION, L..... Meadville
BLAIR, MAUDE ALICE, L..... Erie
CHASE, CARROLL LUTHER, C..... Villenova, N. Y.
CRAIG, EUGENE FORBES, ML..... Warren, O.
CROXALL, CHARLES BISHOP, C..... Titusville
DAVENPORT, GEORGE SEIPLE, E..... Meadville

DILLON, WILLIAM JEFFERSON, E.....Barnesville, O.
DREUTLEIN, MAE CECILIA, L.....Meadville
FRANKLIN, WILLIS HAYES, C.....Adaline, W. Va.
FREEMAN, CHARLES MAXSON, ML.....Mosiertown
HARRIS, HARRY GUSTAVUS, S.....Jamestown, N. Y.
HEYDRICK, MARY TEN BROECK, L.....Meadville
JACKSON, STUART WILSON, E.....Meadville
KEARNEY, CHARLES E., ML.....McKeesport
KELLEY, JAY EARLE, E.....Linesville
LAMPE, SAMUEL CHRISTIAN, E.....Pittsburg
LEET, CLARA BELLE, C.....Greenville
LININGER, THOMAS FRANKLIN, E.....Confluence
MCCONNELL, VIRGIL MILBURN, E.....Mayville, N. Y.
MCCUNE, CALEB, S.....McKeesport
MARSH, LEVERNE ALDIN, L.....Union City
MINER, CLARA MAY, C.....Punxsutawney
PALM, ADA BELLE, L.....Meadville
PARSONS, EVANGELINE, C.....Meadville
PECK, FLORENCE, C.....Meadville
PENTZ, JAMES GARFIELD, S.....Reynoldsville
PETERSEN, MARTHA, L.....Brackettville, Texas
ROGERS, HELEN ERMA, C.....Franklin
SMILEY, ORTON RAY, L.....Mill Village
SMITH, FREDERIC ECHOLS, E.....Franklin
SMITH, RUSSELL CLARENCE, L.....Meadville
SPORR, JOHN HENRY, E.....Meadville
SPRINGER, EBENEZER WILSON, C.....New Castle
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THOMAS, ALICE LILLIAN, L.....Conneaut Lake
TORDELLA, JOHN, E.....Meadville
TOWNLEY, NINA RUTH, L.....Meadville
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Breene, Sarah Louise, C.....Corry
Conover, Fred, E.....Meadville
Dewey, Malcolm Howard, C.....Meadville
Dutton, Bessie May, L.....Meadville
Foster, Daisy Estelle, L.....Meadville
Garver, Blanche Rose, L.....Meadville
Gaston, Arthur Harold, E.....Meadville
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Hazen, Roy Watson, C.....New Castle
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Snearline, Albert Joseph, L.....Meadville
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Stockton, Herbert John, C.....Meadville
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Trosh, Walter Scott, L.....Oil City
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McCartney, Frank Bert, E.....Meadville
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Moore, Mary Millicent, L.....Sumnerville
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Freshmen.

Andrews, Ethel Aurelia, L.....Meadville
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Gaston, Martha Gertrude, L.....Meadville
Gaston, Phylinda Elise, ML.....Meadville
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Hastings, Arthur, E.....Meadville
Hires, Mary Ethel, ML.....Salem, N. J.
Hites, John William Charles, L.....Meadville
Horner, William Edgell, C.....Detroit, Mich.
Hoshino, Ken, ML.....Yokohama, Japan
Hunter, Jesse Merton, E.....Hartstown
Hyskell, Ira David, C.....Smicksburg
Jones, Grayce Mildred, ...Franklin
Kelsay, Harriett, L.....Meadville
Lockwood, Marion Merchant, E.....Meadville
Lotz, Anna Laura, L.....Kinsman, O.
Lyon, Goffrey, S.....McLane
McIntier, Charles Andrew, E.....Corry

McLaughlin, Margaret, C.....Corry
McQuiston, William Jenkins, L.....Atlantic
Malona, Clement Paul, E.....Kennedy, N. Y.
Miller, Frank Purl, L.....Conneaut Lake
Mitchell, Paul, S.....Indiana
Mook, Roy H., E.....Marion, Ind.
Morse, Mabel Irene, L.....Richmond Center, O.
Ohlman, Frank, ML.....Meadville
Ottaway, Adelaide C., C.....Sherman, N. Y.
Pontius, John Wesley, C.....Chicora
Reavley, Albert Addison, C.....Buffalo, N. Y.
Rockwood, Eva Louise, ML.....Union City
Ross, George A., S.....Clymer, N. Y.
Rossiter, Ben, E.....Meadville
Scouten, Roy William, C.....Tidioute
Shaffer, Frederic, S.....Cochranton
Shartle, Wilbur Austin, C.....Conneaut Lake
Stone, George Wa d, C.....Corry
Stone, Harry E., C.....Corry
Sturtevant, Watkin Powell, C.....Conneautville
Swanson, Louis William, C.....Tidioute
Trego, Dorothy Carroll, L.....Meadville
Tribby, Fred N, E.....Meadville
Van Riper, Benjamin Whitman, S.....Meadville
Ward, William Briening, ML.....Pittsburg
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Wilson, Nellie Gertrude, L.....Union City
Yard, Harry Bradford, E.....Erie
Young, Harold M., S.....Mayville, N. Y.

Special.

Adams, Mabel Pearl.....Butler
Bork, Anna Rosalie.....Meadville
Breed, Louise Heim.....Meadville
Dowdell, Alton Luby.....Meadville
Fitch, Frances Elizabeth.....Buffalo, N. Y.
Gaston, Ethel.....Meadville
Giele, Walter Scott.....Meadville
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McCord, Bertha Clendenen.....Wellsburg, W. Va.
Olmstead, Homer George.....Conneaut, O.
Pischell, Emma.....Chicago, Ill.
Ransom, Frederick Garfield.....Lancaster, N. Y.
Rowley, Edith,.....Dunkirk, N. Y.
Smith, Ida.....Pitcairn
Snook, Lee Mae.....Paulding, O.
Wilson, Samuel.....Clarion

Summary of Students.

Resident Graduates	5
Seniors	47
Juniors	30
Sophomores	49
Freshmen	69
Special	23
Total	223

The list of students in the Preparatory School connected with the College is given in a separate catalogue.

Degrees Conferred June 19, 1902.

Doctor of Laws.

Adam Clark Hickman.

Doctor of Letters.

James Evlyn Pilcher.

Doctor of Divinity.

Charles O. Mead
S. T. Westhafer.
Alexander Vance.

Master of Arts.

Frank J. Born
H. Clyde Snook
Alfred C. Elliott
Clarence Homer Lefever
Lloyd Lawrence Swisher
William L. Wilkenson.

Bachelor of Arts.

Tracy Thomas Allen
Alton H. Appleby
Lodema Augusta Bard
John Clayton Barkley
James Edward Bird
Frederic William Blaisdell
William Malcom Buzza
Cecil Seldie Clark
Harry Corle Critchlow
John McKinstry Griffith
Caroline Myrtle Herbert
Grace A. Jenks
Roy Donald Leffingwell
Marguerite Belle McClintock
Myrta Eleanor Mercill
Daniel Melroy Paul
Miriam Potter
Elmer Gould Royce
Carl L. Selkregg
Maude Gertrude Shadduck
Thomas Gardner Shallenberger
Clyde Harold Slease
Theron Franklin Tabor
Robbins Newton Taylor
Hattie Mae Thickstun
Earl Delamater Thompson
Albert Kirkby Travis
Josepha Wilson
Helen Irene Wintermute.

Bachelor of Letters.

Jennie May Brawley
Albert Shingerland Frazier
Ralph Stebbins Greenlee.

Bachelor of Science.

Guert William Ensign
Claude William EnDean
James Garfield Fowler.

CALENDAR FOR 1903-1904.

June 12, 13, 15, 16.....Examinations
14, Sunday, 10:45 a. m.....Baccalaureate Sermon By President WILLIAM H. CRAWFORD.
7:45 p. m., Annual Sermon before College Young Men's Christian Association.
15, 16, Monday and Tuesday, 9:00 a. m., Entrance Examinations.
15, Monday, 8:00 p. m.....Inter-Society Contest
16, Tuesday, 3:00 p. m. Annual Meeting of Board of Control
3:00 p. m.....Class Day Exercises
5:00 p. m. Business Meeting of Phi Beta Kappa
8:00 p. m.....Phi Beta Kappa Anniversary
17, Wednesday, 9:00 a. m., Annual Meeting of Board of Trustees.
1:00 p. m., Meeting of Alumni Association —Annual Dinner.
8:00 p. m., Glee Club Concert.
June 18, Thursday, 9:00 a. m.....Commencement Exercises

Summer Vacation.

September 14, 15, 1903.....Entrance Examinations
September 15, Tuesday.....Fall Term Begins
December 17, Thursday.....Fall Term Ends

Winter Vacation.

January 5, 1904, Tuesday.....Winter Term Begins
January 28, Thursday.....Day of Prayer for Colleges
March 24, Thursday.....Winter Term Ends

Spring Vacation.

April 5, Tuesday.....Spring Term Begins
June 16, Thursday.....Commencement

Allegheny College Preparatory School.

This school is under the direct control and supervision of the college authorities, but has its own building and a distinct corps of instructors.

It aims to prepare students for college with a minimum expenditure of time. It is realized that many students looking forward to a college course are precluded by age or by lack of early advantages from taking a regular four years' course in academy or in high school. Young men and women of maturity can by thorough application fit themselves for college in less time than is necessary for younger and less mature persons. Earnest and capable younger pupils may also in some cases gain time in fitting for college. The work is systematic and thorough and every effort is made to enable the student to work to the best advantage. Under certain limitations students may take a part of their work in college classes. Students registered in the college also who are deficient in certain subjects can pursue these studies under skilled instruction and with every facility for accurate and thorough work.

All instruction is given by college graduates, teachers of thorough preparation and successful experience.

Full particulars, including lists of the instructors and students, are found in the catalogue of the school, a copy of which will be sent on request.

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THE COLLEGE BULLETIN
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SERIES III., No. 1
FEBRUARY, 1904

CATALOGUE

1903-1904

ALLEGHENY COLLEGE

FOUNDED IN 1815

Entered as second-class matter in the postoffice at Meadville, Pa.

EIGHTY-NINTH YEAR

Allegheny College Catalogue

FOR

1903-1904

PUBLISHED BY THE COLLEGE
MEADVILLE, PA.
1904

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Description of the College.

Organization.

Allegheny College was founded in 1815 by citizens of Meadville. Two years later they obtained for their institution a liberal charter, and in 1820 laid the foundation of Bentley Hall. In 1833, by a contract between the Trustees and the Pittsburg Annual Conference of the Methodist Episcopal Church, the College came under the control and patronage of the Methodists of this region. By successive divisions of the Pittsburg Conference, the control and patronage are now vested in the Pittsburg, Erie, East Ohio and West Virginia Conferences. The contract between the Conferences and the Trustees guarantees a liberal and unsectarian spirit in the management of the College, and the students always represent several religious denominations.

Location.

No city in Western Pennsylvania is more advantageously situated than is Meadville. It has two lines of railroad: the Erie, and the Bessemer & Lake Erie. It has also direct connections with the Lake Shore and the Pennsylvania systems. By these routes Pittsburg and Cleveland may be reached in less than four hours, Erie in two hours, Cincinnati in twelve hours, Chicago in thirteen hours, and New York in thirteen hours. An electric road gives direct communication with Erie. Thus easy and expeditious access to the

city is had from all points. The population of Meadville is over 11,000; it is an old and well established city, having cultured society and many educational influences. It has most of the modern improvements, such as paved streets, a complete sewerage system, electric lights, illuminating gas, and natural gas fuel. An electric street railway connects all parts of the city with the College grounds.

Buildings and Grounds.

The College campus embraces sixteen acres on the north side of the town, having an elevation of two hundred feet above French Creek Valley, and twelve hundred feet above the level of the sea. It is well shaded with trees, and has a beautiful outlook upon the town and the surrounding country. In natural beauty the campus is very attractive, and the situation is one of the most healthful in the country. During the last three years extensive improvements have been made in grading and in laying granolithic walks. There is a quite complete representation on the campus of the forest trees of this region, and a systematic effort is being made to improve and enlarge this collection.

The surrounding country is remarkable for its beautiful and diversified scenery, and, apart from its great interest to lovers of nature generally, offers unusual opportunities to students of Geology and Botany.

All the College buildings are heated from a central steam plant and every effort is made to keep them in an attractive and sanitary condition.

Bentley Hall, a fine specimen of Colonial architecture, bears the name of Rev. William Bentley, D.

D., of Massachusetts, who gave his valuable library to the College. The corner stone was laid July 6, 1820. It consists of a central building three stories high above the basement, and two wings two stories in height, and is devoted to recitation rooms, biological laboratories, society halls, and the offices of the President and the Registrar of the College.

Ruter Hall, named after Rev. Martin Ruter, D. D., the second President of the College, is a substantial brick building, erected chiefly by the citizens of Meadville, in 1855. This building contains the museum of the College, and the recitation rooms of the Preparatory School.

Hulings Hall is a large brick edifice, erected in 1881, by Marcus Hulings, of Oil City, and the citizens of Meadville. It is used as a home for young women, and has rooms for sixty. It is about one hundred by eighty feet on the ground, and four stories in height, including the mansard roof, and is supplied with all modern improvements.

Wilcox Hall of Science is a modern building, perfectly adapted to the needs of scientific work, and devoted solely to instruction in Physics and Chemistry. The lecture room is in the form of an amphitheater and will seat one hundred and twenty students. There are ten working rooms. The laboratories are well equipped with illustrative apparatus, and new pieces are constantly being added.

Gymnasium.—The building is in the early Italian style of round arched brick architecture, the first floor being of native rock-faced stone, the upper portion and rear extension being of brick. The building is T-shaped in plan, the front portion being two stories

high, and containing on the first floor the director's room, locker room, and baths. On the second floor are large assembly and committee rooms for theYoung Men's Christian Association. The gymnasium floor occupies the rear extension. It is well lighted from the three sides and has a clear height of twenty feet from floor to bottom of steel roof trusses, from which are suspended the running track and the usual gymnasium apparatus. The building is finished in natural wood throughout, and has hard wood floors. It is equipped with all the modern apparatus of a first-class gymnasium.

Newton Observatory.—This building, completed in 1901, was built from funds contributed by Mrs. Mary M. Newton, of Batavia, Illinois, in memory of her husband, Captain D. C. Newton, who was once a student in the college. It is a stone building of fine architectural appearance, containing, in addition to the observing room, a transit room, a computing room, and the director's office. The mountings and other fixtures were supplied by Messrs. Warner & Swasey, Cleveland, Ohio.

Ford Memorial Chapel.—Captain John B. Ford, of Creighton, Pa., gave thirty-four thousand dollars for a new chapel, in memory of his wife. The corner stone was laid in June, 1901, and the building dedicated one year later. It is of rock-face Cleveland sandstone, in Gothic-Romanesque style, with an auditorium seating four hundred fifty, besides a gallery seating one hundred fifty, and an oratory seating one hundred fifty. In the richness and chasteness of its exterior finish and interior appointments the building is one of the finest college chapels in the country.

Mrs. James A. Ballantyne and Misses Nellie and Stella Ford, granddaughters of Captain Ford, contributed six thousand dollars for a pipe organ for this building. This splendid instrument was designed by W. L. Mayer, of Pittsburg, and was built by the late Julius Neef, of Philadelphia. It has three manuals and pedals and 1,920 pipes, and is supplied with all the latest and best devices of great organs.

The Library Building.—This building, the gift of an anonymous donor, is of vitrified brick with terra cotta trimmings, in Italian-Renaissance style. It is eighty-five by seventy-four feet, and in addition to a spacious general reading room and the usual stack room, cataloguing room, and librarian's rooms, contains a large reference reading room and several seminar rooms. The building is fire-proof and has room for one hundred thousand volumes. The aim has been to make it both beautiful architecturally and eminently practical. Experience has shown it to be perfectly adapted in every way for the peculiar uses of a college library.

General Purpose.

This institution is a college, that is to say, a training school. Its purpose is to prepare those students who pass to the Bachelor's degree for any kind of professional study, but it does not undertake to prepare a student to enter upon any profession without special study. And it advises its graduates to avail themselves of the advantages of well-equipped universities. The experience of the college proves that its graduates are able to distinguish themselves in various professional careers, whenever they have added to their college training the special equipment for success in such professions. This general purpose controls the methods of the college in all departments of instruction. The end sought is not complete knowledge of any branch of study, but thorough discipline and correct habits of observation and reflection.

An increasing proportion of our graduates enter not upon professional but upon business life. The general principle above stated applies to them with as much force as to those who enter professions. The training of a college does not teach a man how to do business successfully, but it does prepare him to learn any business rapidly, and to attain large success, if he has the requisite talent.

Courses of Study.

The college has three parallel courses of study, which lead to the degree of Bachelor of Arts.

I. The Classical Course combines all the excellencies of the time-honored classical course. By immemorial use it has proved its eminent value, and is worthy of the confidence and respect which a long venerated observance gives. For a full and harmonious preparation for the varied professions and employments of life, it is unexcelled. The wide range of electives in the Junior and Senior years enables a student to do special work in favorite lines.

II. The Latin-Scientific Course requires the same preparation as the Classical, but French will be accepted in place of Greek. This course includes extended work in Mathematics and the chief science subjects, and by extensive laboratory practice prepares the student for original research. The name of this course, hitherto Scientific, has been changed in order to emphasize the liberal proportion of culture studies in it and the fact that it leads to the A. B. degree. The needs of those persons who desire a scientific course without Latin are met by the Civil Engineering Course.

III. The Course in Latin and Modern Languages requires the same preparation as the Classical, except that two years of French or German are substituted for two years of Greek. Two years of

German or French are substituted for two years of Greek in the Freshman and Sophomore years. This course is adapted to the needs of those who prefer to omit the Greek entirely and give more time to the modern languages.

The Course in English and Modern Languages, leading to the degree of Bachelor of Letters, requires the same preparation as the course in Latin and Modern Languages, except that for the three years of Latin there may be substituted two years of German, and extra work in Literature, History, or Science. This course offers thorough training in English, History, and the Modern Languages, with liberal electives in other departments, and is especially adapted to the needs of those who want neither Latin nor Greek.

The Civil Engineering Course.—The object of this course—which is not parallel to the literary courses—is to fit young men for civil engineering, and to furnish a thorough training in scientific studies. The course is thoroughly practical and adapted not only to those who intend to practice engineering as a profession, but also to the wants of a class of students desiring to fit themselves as soon as possible for some of the numerous new pursuits opened by modern invention and science. The technical work of the Junior and Senior years may be omitted by those who do not desire to pursue engineering as a profession. Such persons will take further work in Biology and Philosophy, as is explained in connection with the table of required work. This course leads to the degree of Bachelor of Science.

Special Studies.

Persons desiring to pursue studies in the College are, as a rule, required to be prepared to enter the Freshman class as a candidate for some one of the degrees. Under exceptional circumstances, however, persons who are not candidates for a degree may be admitted as special students and allowed to pursue selected studies. Every such person shall be required to satisfy the Faculty that he is prepared to do, with profit, the work which he selects. Each case will be decided on its own merits.

Requirements for Admission.

All the subjects required for admission are arranged in Groups, which will be found below.

The particular groups required for admission to each of the several courses will be found designated on page 20.

Groups.

I. English—1. *Reading and Practice.* A limited number of books are assigned for reading. The candidate is required to present evidence of a general knowledge of the subject-matter of these books, and to answer simple questions on the lives of their authors. The form of examination will usually be the writing of a paragraph or two on each of several topics, to be chosen by the candidate from a considerable number—perhaps ten or fifteen—set before him in the examination paper. The treatment of these topics is designed to test the candidate's power of clear and accurate expression, and calls for only a general knowledge of the substance of the books. In place of a part or the whole of this test, the candidate may present an exercise book, properly certified to by his instructor, containing compositions or other written work done in connection with the reading of books. In preparation for this part of the requirement, it is important that the candidate shall have been instructed in the fundamental principles of rhetoric.

The books set for this part of the examination will be:—

In 1904, and 1905—Shakspeare's Merchant of Venice and Julius Cæsar; The Sir Roger de Coverley Papers in "The Spectator"; Goldsmith's Vicar of Wakefield; Coleridge's Ancient Mariner; Scott's Ivanhoe; Carlyle's Essay on Burns; Tennyson's Princess; Lowell's Vision of Sir Launfal; George Eliot's Silas Marner.

In 1906, 1907, 1908—Shakespeare's Macbeth and The Merchant of Venice; The Sir Roger de Coverley Papers in "The Specta-

tor"; Irving's Life of Goldsmith; Coleridge's The Ancient Mariner; Scott's Ivanhoe and The Lady of the Lake; Tennyson's Gareth and Lynette, Lancelot and Elaine, and The Passing of Arthur; Lowell's The Vision of Sir Launfal; George Eliot's Silas Marner.

2. *Study and Practice.* A smaller number of books are assigned for more careful study. The examination upon these books covers subject-matter, form, and structure, and also tests the candidate's ability to express his knowledge with clearness and accuracy. In addition, the candidate may be required to answer questions involving the essentials of English grammar, and questions on the leading facts in those periods of English literary history to which the prescribed works belong.

The books set for this part of the examination will be:—

In 1904 and 1905—Shakspeare's Macbeth; Milton's L'Allegro and Il Penseroso, Comus, Lycidas; Burke's Speech on Conciliation with America; Macaulay's Essays on Milton and Addison.

In 1906, 1907, 1908.—Shakspeare's Julius Cæsar; Milton's L'Allegro, Il Penseroso, Comus, and Lycidas; Burke's Speech on Conciliation with America; Macaulay's Essay on Milton, and Life of Johnson.

II. Mathematics.—Arithmetic, including the Metric system. Algebra, through Quadratic Equations. Geometry, Plane, Solid, and Spherical; eight books of Wentworth's Geometry or an equivalent.

Ordinarily the time spent should not be less than five hour recitations weekly for two full school years.

III. Latin.—Grammar (Allen and Greenough's). Composition, Collar or Daniell. Cæsar, Gallic War, four books Cicero, seven orations (the Manilian law to count as two). Vergil, Aeneid, six books. The Roman method of pronunciation is used.

Ordinarily the time spent should not be less than five hour recitations weekly for three full school years.

IV. Greek.—Grammar. (Goodwin's). First Greek Book, Gleason and Atherton, or White. Xenophon, Anabasis, seven books. Prose composition, Pearson or Bonner. For the last three books of the Anabasis an equivalent in other Attic prose or in Homer will be accepted.

Ordinarily the time spent should not be less than five hour recitations weekly for two full school years.

V. German.—Joynes-Meissner Grammar completed; transla-

tion of four hundred pages of modern German prose and one classic drama; some practice in conversation.

Ordinarily the time spent should not be less than five hour recitations weekly for two full school years.

VI. French.—Chardenal's Complete French Course completed; Whitney's, or Super's, or Rollins' French Reader; also six hundred pages of modern prose fiction and four classic dramas translated; some practice in conversation.

Ordinarily the time spent should not be less than five hour recitations weekly for two full school years.

VII. History.—United States, Johnson, or Montgomery. Eastern Nations and Greece, Botsford. Rome, Myers. Civil Government.

VIII. Science.—Physical Geography, Davis. Physiology, Walker. Natural Philosophy, Gage, with experiments.

More extended work in one or two of the above subjects will be accepted in place of shorter courses in the three. Elementary Biology or Chemistry will be accepted in place of one of the subjects.

In all of the above groups other authors and other works will be accepted if fully equivalent in quantity and character to those specified.

Of the above groups there are required for admission:

To the Classical Course, I., II., III., IV., VII., VIII.

To the Latin-Scientific Course, I., II., III., VII., VIII., and IV. or V. or VI.

To the Latin and Modern Language Course, I., II., III., VII., VIII., and V. or VI.

To the English and Modern Language Course, I., II., VII., VIII., V. or VI., and III., or additional work, fully equivalent in quantity and character, in modern languages, history, or allied subjects.

To the Civil Engineering Course, I., II., VII., VIII., and V. or VI. For V. or VI. two full years'

work in Latin, covering two-thirds of Group III., will be accepted. In that case the student is urged to take both German and French in his college course.

Beginning with the Fall of 1905 two additional years in foreign language work will be required for entrance to this course.

Students who have not fully completed the subjects specified for the course they wish to enter may be admitted to the Freshman Class conditionally, if the sum of their deficiencies does not exceed a half year's work. They will be admitted to such college classes as they may be qualified to enter and will be given an opportunity to bring up their deficiencies in the Preparatory School. Under certain fixed restrictions credit may be obtained at entrance for work done in college subjects and such advanced credit may be offset against deficiencies in preparatory work until the latter can be removed.

All admission conditions must be removed before the beginning of the Junior year.

Examinations.—Examinations for admission are held on Monday and Tuesday of Commencement week, and on Monday and Tuesday preceding the opening of the Fall Term.

All examinations away from Meadville are under direction of the College Entrance Examination Board, whose certificates are accepted in place of examinations in all subjects.

Admission by Certificate.—Certificates for all the above work will be received from approved schools. The right is reserved, however, to require preparatory work from students who are not able to

make satisfactory progress in college classes. In all cases an examination in English is required, adapted to test the candidate's power of correct and idiomatic expression. No candidate will be accepted in English whose work is notably defective in point of spelling, punctuation, idiom, or division into paragraphs.

Principals of schools desiring to be placed on the approved list are invited to address the President.

Certificates from the Regents of the State of New York will be accepted. All others must be made out on special blanks, which will be sent on application. No other certificates will be received.

Courses of Instruction.

In this detailed description of the courses of instruction the number of "hours" refers to the number of hour recitations weekly.

All courses are offered yearly, except as specially noted.

Two hours of laboratory work are counted as equivalent to one recitation hour.

Astronomy.

The object aimed at in these courses of Astronomy is two-fold. Course I. is general and is intended to give the student a knowledge of the scope of the science without the solution of the mathematical problems which form such an important part of advanced work. Course II. takes up such work as the determination of latitude and longitude time and the many other questions relating to the subject.

COURSE I. — Astronomy. A general introduction to the subject by means of text-book and lectures.

Spring term, four hours.

COURSE II.—The physics and mathematics of Astronomy; practice in the use of astronomical instruments and the taking of observations. Open to those who have completed Course I. and have had the required mathematical training.

Fall and Winter terms, three hours.

The department has a large number of lantern slides for illustrating lectures. The Newton Observatory is thoroughly equipped for practical work and students will be trained in the use of the equatorial telescope and the transit.

Biology.

It is the aim of this department, on the one hand, to give the student a general knowledge of the funda-

mental facts and principles of Biology; on the other hand, to familiarize him with the methods of investigation in this science as a preparation for advanced work and original research. Courses I., II. and III. are adapted to meet the needs of a general college training. Course IV. is intended for those who expect to become professional biologists, science teachers in high schools, or physicians. Practical work in the laboratory forms a valuable part of the training of each course.

COURSE I. — General Biology. Two terms of the year are devoted to Zoology, one term to Botany. A study of historical and systematic Biology, and the morphology, physiology, development, distribution, evolution, etc., of both animals and plants, an attempt being made to give the student a comprehensive view of the whole science. The course is planned to meet the needs of those students who do not have an opportunity to study the subject further, serving at the same time as a basis for all of the more advanced courses. The laboratory work consists of the study of a series of typical animals and plants, together with the thorough study of a single form (earthworm or frog). Lectures or recitations, two hours a week; laboratory work, two hours a week.

Throughout the year, three hours.

COURSE II. — Zoology. The purpose of this course is to give a comprehensive survey of the animal world and to familiarize the student with the habits and structure of animals. A careful study of typical forms is made in the laboratory. This is followed by a discussion and explanation in the class room of the facts observed in the laboratory. Lectures and recitations, one hour a week; laboratory work, four hours a week. Elective for all who have completed Course I.

Throughout the year, three hours.

Given in 1904-5.

COURSE III. — Botany. Plant morphology and physiology during the fall term. The winter and spring terms are given up to a study of all the groups of the plant world, discussing their essential characteristics and relationships. Considerable atten-

tion is given to Bacteriology at the proper time in the course, not only on account of its value to those who intend to enter the medical profession, but also on account of its importance to everyone in the light of modern knowledge. Lectures and recitations, one hour a week; laboratory work, four hours a week. Elective for all who have completed Course I.

Throughout the year, three hours.

Given in 1905-6.

COURSE IV. — Advanced Zoology. The first half of the year is devoted to the study of Vertebrate Histology, with especial reference to microscopic technique. This is followed by a course in Embryology; maturation and fertilization of the starfish, and a study of the early development of the chick. Laboratory work, with occasional lectures, eight hours a week. Elective for all who have completed Courses I. and II. In exceptional cases, Courses II. and IV. may be taken the same year.

Throughout the year, four hours.

Additional Courses. — Additional courses will be offered, subject to certain limitations, when there is sufficient demand for the work.

Chemistry.

The courses in this department are planned chiefly for a cultural training. The aim is to give the student a correct idea of the method of reaching scientific results in general and at the same time to lead to independent research both for mental discipline and for the acquirement of real knowledge of the subject. The practical work in the laboratories is emphasized and forms a large part of each course.

COURSE I. — Inorganic Chemistry. The principles of the science in connection with a study of the more important elements and compounds are given in this course. Practice in the writing of chemical equations and in the solution of chemical problems is emphasized. The lectures are illustrated by experiments which are, as far as possible, repeated by the students in the laboratory; lectures and recitations two hours a week; laboratory work two hours a week.

Throughout the year, three hours.

COURSE II. — Qualitative Analysis. Special attention is given in this course to the analytical reactions of each one of the more common inorganic bases and acids. The more intimate knowledge of the elements and their compounds thus gained enables the student to generalize and classify chemical phenomena. Thorough practice in the separation of metals and acids from each other in unknown liquid and solid mixtures and in the preparation of minerals for analysis is given. Laboratory and lectures six hours a week throughout the year. Elective for students who have completed Course I.

Throughout the year, three hours.

COURSE III. — Quantitative Analysis. The aim of this course is to give a thorough knowledge of the principles of gravimetric and volumetric analysis, and their applications in the separation and determination of the common bases and acids from salts, minerals, etc. It is of especial value as a training in the more refined methods of manipulation, neatness and accuracy. Laboratory and lectures six hours a week throughout the year. Elective for students who have completed Courses I. and II.

Throughout the year, three hours.

Economics.

The courses are planned as electives in the Junior or Senior years. Particular attention is given to the study of the development of economic life and institutions, American conditions being specifically analyzed. Students are made familiar with the accepted principles of the science and are given a practical acquaintance with the complex modern social organization. Encouragement is also offered to individual research, leading to possible future specialization. Lectures and comparative examination of various authorities constitute the general method of instruction.

COURSE I. — This course continues throughout the year, beginning with the introductory text of Bullock and continuing with Hadley. Assigned readings are given in Marshall's Princi-

ples of Economics and the Austrian authorities. Detailed study is made of specific fields as trusts, finance, tariff, and banking. The Spring term is given to an examination of social conditions, Wright's Practical Sociology being used as an outline.

Throughout the year, three hours.

COURSE II. — Economic Theories. This course is offered to a limited number of those who have completed Course I. It consists of a survey of the leading principles of the science as propounded in Smith, Ricardo, Mill, Jevons, Senior, Menger, Weser, Bohm Bawerk, Walker, and Clark.

Winter term, two hours.

COURSE III. — Transportation. A course of lectures on the American Railway system. This work is open to advanced students and furnishes a knowledge of railway economics and of the problems of government regulation. An extensive use is made of the Inter-State Commerce Commission findings and national industrial data.

Spring term, two hours.

Engineering.

The instruction in this department covers the technical subjects that lie at the basis of engineering work. Constant use is made of instruments and much of the work consists of actual field work. With the exception of I. the courses are open only to students in the Civil Engineering Course.

COURSE I. — Surveying, with level, transit, and compass. Methods of determining areas; laying out and dividing land; plotting and topographical drawing.

Spring term, four hours.

COURSE II. — Highway Engineering. The approved methods of constructing Macadam, Telford, gravel, and earth roads; wood, stone, brick, and asphalt pavement for cities, and the methods of maintaining country roads and city pavements.

Winter term, two hours.

Given in 1905-6.

COURSE III.—Civil Engineering. This course is designed to make the student familiar with the strength and qualities of materials used in engineering structures, with masonry and

foundations and with the construction and maintenance of roads and railroads.

Spring term, four hours.

Given in 1905-6.

COURSE IV. — Railroad Engineering. This course includes a reconnoissance, preliminary and location surveys and estimates for a line of about two miles through a country as difficult as is ordinarily encountered. Plots and working drawings.

Since this course consists largely of field work, the members of the class must be careful to arrange their studies in such a way as to leave their afternoons free for such practical work.

Fall term, four hours.

Given in 1905-6.

COURSE V. — Bridges and Roofs. Including analytical and graphical determination of the stresses in bridges and roofs, together with a study of actual structures.

Winter and Spring terms, four hours.

Given in 1904-5.

English Bible.

The work in this department is intended to open to the student the rich stores of literature contained in the Bible; to familiarize the student with the history of the Hebrew people, their civilization, and their influence on the world; and to lead to the critical study of the spirit and form of Hebrew literature as it is shown in the English version. The courses do not touch questions of doctrine or belief. The English Bible is a great monument of our literature and as the source of our knowledge of one of the great civilizations of the world can not be wholly neglected by the student.

COURSE I. — A General Introduction to the English Bible. A study of the formation of the Old and New Testament canons, of the origin and value of the chief ancient versions and manuscripts, and of the history of the English Bible, followed by a general survey of biblical literature. The history, the lyric-poetry, the wisdom literature, prophecy and the epistolary liter-

ature are each studied as a whole, after which parts of each are subjected to a more detailed study. The course is an introduction to the more elaborate following courses. It forms a part of the course in English I., and as such is required of all students.

Fall term, four hours.

COURSE II. — New Testament History and Literature. The Maccabean and Roman periods of Jewish history are first studied in order to bring out the political, social and religious background of New Testament history. An outline study of New Testament history proper is then followed by a careful study of the books of the New Testament, from both the literary and historical points of view.

Winter and Spring terms, three hours.

COURSE II. — Old Testament History and Literature. The method here pursued is similar to that in the preceding course. In the study of Hebrew history the data furnished by the Bible receive chief attention, but they are supplemented by the testimony of the monuments and other sources. The Old Testament literature is taken up in the order of its historic development and its relation to contemporary history is made clear.

Throughout the year, three hours.

Given in 1904-5.

English Language and Literature.

The aim of this department is to make the student as familiar as may be with English. The rhetorical courses are designed to cultivate effective expression of thought and intelligent appreciation of language. These powers are fundamental to success in every department of college work. The courses in the history of the language and of the literature lay stress upon the development of each, and are accompanied by extensive readings to illustrate the successive stages. Other courses are given which concentrate attention upon a single period or a group of writers in order to train the student in methods of careful literary

study. The periods covered in this advanced work are changed from time to time.

COURSE I. — English Bible as literature. This work is described under English Bible I.

Elocution. Two hours weekly during the Winter and Spring terms are devoted to Course I. in Elocution.

Practical Rhetoric. During the Winter and Spring terms two hours of recitation, or the equivalent of laboratory work, are devoted to this subject. The aim is constructive rather than critical or scientific. Frequent short compositions, impromptu or prearranged; longer essays at stated times. The order of study is the Whole Composition, the Paragraph, the Sentence, Diction.

Throughout the year, four hours.

COURSE II.—A. Advanced Rhetoric.—B. Elements of English Literature.

A. A somewhat detailed study of the forms of prose discourse, their structure and their style. The method of study is both critical and constructive.

B. The course includes (1) a sketch of the History of English Literature; (2) class readings of typical English poems (including one play of Shakspeare), accompanied by class discussions and lectures by the instructor; (3) private readings and written reports.

Throughout the year, three hours.

COURSE III. — A Careful Study of One Period of English literature—its historic setting, its principal writers and their works, the growth or decay of literature within its bounds.

A. The Victorian Period: Carlyle, Ruskin, Arnold, Tennyson, Browning.

Given in 1905-6.

B. English Poetry: Burns, Wordsworth, Coleridge, Scott, Shelley, Keats.

Given in 1904-5.

Elective for those who have completed Course II.

Throughout the year, three hours.

COURSE IV. — Principles of Literary Criticism. Consideration of the essential elements of literature, and analysis of various literary forms. Extensive illustrative readings followed by class discussions or individual reports.

Given in 1904-5. *Fall term, two hours.*

COURSE V. — American Literature. Outlines of its development. Lectures upon representative authors. Study of masterpieces.

Winter and Spring term, two hours.

Given in 1904-5.

COURSE VI. — Prose Fiction. The novel, the romance, and the short story. Studies in the structure and significance of these popular forms of modern English fiction.

Fall term, two hours.

Given in 1905-6.

COURSE VII. — Shakspeare. Analytic and interpretative studies of five plays of Shakspeare—*As You Like It, Hamlet, King Lear, Antony and Cleopatra, The Tempest.* A critical reading of Dowden's *Shakspeare Primer* will be required in connection with this course.

Winter and Spring terms, two hours.

Given in 1905-6.

Courses IV. and V. may be elected separately, but together fill out a year. The same is true of Courses VI. and VII. Elective only for those who have completed Course III., and for a limited number of those who have completed Course II.

Expression and Oratory.

The work in this department aims to cover the essential principles of expression with their application, not only to public speaking, but also to every day conversation; to enable the student to secure a correct and refined pronunciation of the English tongue—a distinct utterance, a flexible and melodious voice, and pleasing as well as natural intonations. Since many voices differ in physical structure, it has been found necessary to adapt the work to individual needs, each member of the class receiving special attention in correction of mannerisms and defects. Individuality is considered of the first importance, and the training is not only for a better expression of the thoughts of others, but also to help the student to a clear interpretation of his own impressions.

COURSE I. — Vocal Culture. Thorough drill in the pronunciation of the vowel sounds, articulation, emphasis. Expression. Practice to overcome indistinctness and mannerisms and to secure a pleasing and natural rendition of narrative, descriptive and didactic styles. This course forms a part of English I.

Winter and Spring terms, two hours.

COURSE II. — Interpretation of more difficult selections of prose and poetry, a careful study of the masterpieces of English and American orators. Gesture as power in expression.

Throughout the year, two hours.

COURSE III. — A study to secure intelligent and forcible expression of oratorical thought, training in imaginative literature, creative gesture; study of Hamlet, Macbeth, or Lear.

Throughout the year, two hours.

COURSE IV. — This course is intended for young men who intend to enter the ministry. Careful attention is paid to extemporaneous speaking, Bible reading, and hymn reading.

Throughout the year, one hour.

Course I. is required of all students. Students in the English and Modern Language course may elect a total of twenty additional hours, in either class or private work; other students may elect a total of twelve hours additional.

For Courses III. and IV. an additional fee of $5.00 per term-hour is charged.

French Language and Literature.

In the teaching of Modern Languages no single method is exclusively pursued. An accurate pronunciation in accordance with established phonetic principles is insisted upon, and abundant conversational exercises are carried on in all classes with a view to familiarizing the student with the spoken language. A certain amount of prose composition, designed to afford a more intimate knowledge of the grammatical and syntactical structure of French, is required in all courses. For the more advanced classes frequent exercises in sight-reading and dictation are assigned,

and in the last year the instructor lectures in the vernacular upon some phase of literature.

The department aims especially to aid the student to an appreciative interest in French culture, and incidentally to furnish such a knowledge of the history, geography, and social and political condition of this country as goes to broaden the intellectual horizon. The relationship of English to French is carefully pointed out, and special emphasis is placed upon the disciplinary value to be derived from linguistic study.

COURSE I.—Fall Term. Frazer and Squair's French Grammar. Reading and translation of easy prose selections. Winter term. Completion of Frazer and Squair, each recitation alternating with the study of a prose text, as Mairet's La Tache du Petit Pierre, containing sentences for composition based upon the text. Spring term. One hour a week devoted to the study of composition and syntax from Frazer and Squair. Study and translation of such prose texts as Sand's La Mare au Diable and Merimee's Colomba.

Constant and persistent drill in the pronunciation and grammatical structure of the language and the acquisition of a vocabulary, are the features of the year's work.

Throughout the year, four hours.

COURSE II.—Study of French Literature and literary movements in the seventeenth and eighteenth centuries. The reading and study of four dramas from the works of Corneille, Racine, and Moliere. The study of Descartes, Bossuet, Pascal, La Rochefoucauld, and La Fontaine in copious extracts from their works. Beaumarchais' Le Barbier de Seville. Lectures, for the most part in French, on the literary movement in these two centuries. The preparation of themes and assigned readings from Petit de Juleville's Histoire de la Litterature et de la Langue francaise and other works in the library. A part of the work of two terms is devoted to exercises in composition.

The nationalization of French literature in the seventeenth century, the various influences giving shape to literary genres, and the essential difference in the literary ideals of the seventeenth and eighteenth centuries are carefully noted. Considerable time

is also devoted to the study of idiomatic expressions and advanced syntax.

Throughout the year, four hours.

Given in 1905-6.

COURSE III. — Study of French literature and literary movements in the nineteenth century. The Romantic School. Lamartine's Graziella and selections from his poems. Hugo's Preface de Cromwell and Hernani. La Comedie de Moeurs. Two or more plays selected from the works of Dumas fils, Augier, Scribe, Labiche and Pailleron. The nineteenth century novel in its Romantic, Realistic and Naturalistic aspects. The study of Dumas, Sand, Balzac, Erckmann-Chatrian, Daudet, and Zola. A part of the work of two terms is devoted to exercises in prose composition. In the last term lectures, for the most part in French, upon nineteenth century literature are given, based upon Pellissier. Students are assigned the preparation of themes and private readings at the discretion of the teacher. The study of idioms and the syntactical structure of the language is also a prominent feature of this course.

Throughout the year, four hours.

Given in 1904-5.

Courses II. and III. alternate in successive years, but only three hours credit will be allowed students who take Course II. or III. as a third year's course.

Geology.

The course in Geology is eminently a general culture course, explaining as it does so many common phenomena and leading the student to take a greater interest in natural objects. The class work is supplemented by practical work in the field, museum and laboratory.

COURSE I. — General Geology. The Fall term is given up to the study of structural and dynamic Geology, as illustrated by the region about Meadville. The field work consists of a number of excursions (usually six) to points of interest in the immediate vicinity. The Winter term is devoted to the study of historical Geology and Paleontology; chiefly the history and stratigraphy of the North American continent. During this term, the labora-

tory work consists of the study of a typical series of fossil animals. Lectures and recitations, three hours a week; laboratory work or field work, two hours a week. Open only to students who have completed two of the following courses: Biology I., Chemistry I., Physics I.

Fall and Winter terms, four hours.

German Language and Literature.

The aims and methods in this department are essentially the same as for the department of French, as detailed above.

COURSE I.— Fall term. Vos' Essentials of German Grammar. Reading and translation of Grimm's Marchen begun. Winter term. Grimm's Marchen completed (Vos' edition), Storm's Immensee with composition based upon the text. Spring Term. Reading and translation of Schiller's Wilhelm Tell and constant grammatical drill.

Great stress is placed upon accurate pronunciation and fluency in reading. The student's ear is trained to familiarity with German sounds by frequent oral exercises, and by committing short poems to memory.

Throughout the year, four hours.

COURSE II.— Harris' or Wesselhoeft's German Composition once a week. Goethe's Hermann and Dorothea. Freytag's Die Journalisten. Nichol's Three German Tales. Dillard's Aus dem Deutschen Dichterwald. Selections from Freytag's Bilder aus der Deutschen Vergangenheit.

Drill in the elements of syntax and oral exercises are features of this course. At the completion of this course the student is supposed to read German prose of average difficulty at sight.

Throughout the year, four hours.

COURSE III.— A study of the classic period of German literature. Goethe's Faust, Part I. Schiller's Wallenstein, Lessing's Nathan der Weise. Occasional exercises in prose composition. Lectures, for the most part in German, upon the literary developments of the eighteenth century, including an account of the lives and works of the two authors studied in class. Reports upon private readings assigned by the instructor.

Wallenstein's Lager or both the Lager and the Piccolomini

may be omitted from this course. Representative masterpieces of a similar character may be substituted for any of the above from the works of Lessing, Goethe, or Schiller.

Throughout the year, three hours.

Given in 1904-5.

COURSE IV.— A study of German literature and the literary movement in the nineteenth century. Such representative authors as Heine, Kleist, Grillparzer, Otto Ludwig, Scheffel, Wagner, Sudermann, and Hauptmann are read and studied in class. Especial attention is devoted to the Romantic and Naturalistic schools. Grammatical structure and idioms, together with occasional exercises in composition, are given. In the last term the instructor lectures in German upon German literature in the nineteenth century, and reports upon assigned readings which are rendered in class. Students in the course are expected to read from 160-300 lines at a recitation.

Throughout the year, three hours.

Given in 1905-6.

A voluntary class meets one hour weekly for practice in conversation.

Graphics.

The work in this department is eminently practical. The actual needs of engineers are kept in mind, and the work is adapted thereto. With the exception of IA the courses are open only to students in the Civil Engineering Course.

COURSE I.—Free Hand Drawing. Elementary drawing, including a thorough training of the eye and hand in outline drawing, shading, and lettering.

Fall term, four hours.

COURSE IA.— Scientific Drawing. Open only to students in the Latin-Scientific Course. Has special reference to the accurate representation of scientific forms.

Throughout the year, one hour.

COURSE II.— Mechanical Drawing. This includes the study of the instruments and materials used, the methods of caring for them, projection drawing, isometrical drawing, cabinet drawing, and the principles of shading and tinting.

Winter term, four hours.

COURSE III.—Descriptive Geometry, as applied to the representation by projection to all geometrical magnitudes, the intersections and tangencies of developable, double curved, and warped surfaces. Spherical projections, shades, shadows, and linear perspective.

Throughout the year, four hours.

COURSE IV.—Machine Drawing is intended as an exercise in mechanical drawing and consists of copying working drawings, tracing and blue printing; making working drawings from parts of machines and from models.

Fall term, three hours.

COURSE V.—Architectural Drawing. Working drawings of a frame building.

Winter term, two hours.

Greek Language and Literature.

The aim of the department is to lead the student to the acquisition of a living knowledge of the Greek language as an introduction to a practical acquaintance with Greek life and thought. It is believed that by careful and accurate work in the first years of the language the student can gain such knowledge as will enable him to read widely and independently. The courses laid down are such as are thought to be best adapted to that end. They are not invariably followed, but may be altered as the needs and tastes of the class make expedient. The work is varied, and an attempt is made to give a view of all departments of the literature. The department possesses a small collection of casts of antique sculpture, painted vases and other antiquities, and about a thousand photographs.

A voluntary class is formed each year for the purpose of special drill in sight reading.

COURSE I.—Homer. *The Iliad or The Odyssey.* Detailed study of two or three books and rapid reading of as much more as the time allows. This rapid reading of the Homeric poems

as literature is made the basis of the study of early Greek life and civilization.

One hour a week is devoted to private reading in Attic prose and composition based thereon. The aim is to develop a vocabulary and an accurate knowledge of Greek Syntax.

Throughout the year, four hours.

COURSE II. — **Lysias,** *Selected orations.* Study of Attic Legal Antiquities. Selections from Aristotle's Constitution of Athens are read as collateral work.

Plato, *Apology* and *Crito* and selections from *Phaedo.* Outline of Greek Philosophy.

Greek Literature, text book and lectures. Assigned readings on special topics in Greek history and literature. Reading at sight.

Throughout the year, three hours.

COURSE III.—A. Greek Drama. Detailed study of two plays and rapid reading of several others. Usually the following will be read: Aeschylus' *Prometheus Bound,* Sophocles' *Oedipus Tyrannus,* Euripides' *Medea,* and Aristophanes' *The Frogs.* Individual investigation of special topics. The course is made not only a study of the rise and development of the Greek Drama, but also a study of literary evolution.

Throughout the year, three hours.

B. Greek Oratory. — Andocides, Isocrates, Demosthenes. The history and politics and the public and private antiquities of the times. Lectures and assigned readings in Greek, English, and German.

Throughout the year, three hours.

One of these courses is given each year. Open to all who have completed Course II.

COURSE IV. — **Classical Archaeology.** Lectures on Architecture, Vase Painting, and Sculpture, illustrated with casts, photographs, and drawings. Open to those who have completed Course I., and under some limitations may be elected by students having no knowledge of Greek.

Throughout the year, two hours.

Given in 1905-6.

COURSE V. — **Greek Testament.** A minute and critical study of a portion of the New Testament to insure a familiar and accurate knowledge of vocabulary, syntax, and idioms, followed by

more rapid reading to develop ease and rapidity in grasping the thought of the original. The purpose of the course is to lay the foundation for exegetical work. Open to all who have completed Course II.

Throughout the year, two hours.

Given in 1904-5.

COURSE VI. — Greek Literature. A careful survey of the field from Homer to the Roman Period. One hour a week is devoted to lectures and text-book work; one hour is given to critical readings in English translations and two hours to readings in Greek. Open to all who have completed Course II.

Throughout the year, four hours.

Given in 1904-5.

COURSE VII. — Greek Literature in English. The course consists of the lectures, text-book work and English readings of Course VI. It may be elected by students having no knowledge of Greek.

Throughout the year, two hours.

Given in 1904-5.

Hebrew.

A year's work in Hebrew is open to candidates for the Christian ministry. It is believed that the student who elects this course and that in Greek Testament—Greek V.—can by some private study easily fit himself to enter upon the second year in Theological Seminary.

COURSE I. — Bissell's Hebrew Grammar, completed. Twelve or more chapters in Genesis read.

Throughout the year, four hours.

This course is given only in alternate years. It will be given during the year 1905-6, if elected by a sufficient number.

History.

Courses are offered in History throughout the Sophomore, Junior and Senior years. The aim is to give to the student such a knowledge of the facts and principles of history as is essential to a liberal education and as will serve as a preparation for graduate

studies or for the study of law and journalism. The courses offered are confined to the mediæval and modern periods. The studies in mediæval history are preceded by a brief review of ancient history. Instruction is given by means of lectures, text-books, essays, oral and written reports on assigned readings in standard authorities.

COURSE I. — Outlines of European History from 375 A. D. to the French Revolution. This course continues throughout the year, and is required for admission to Courses II. and III. The work of the first half of the year is devoted to the mediæval institutions and is based on Emerton's Introduction to the Middle Ages and Mediæval Europe. Required readings are assigned in Fisher's History of the Christian Church and Adam's Civilization of the Middle Ages. The work of the last half of the year is based on Lodge's Modern Europe. Required readings are assigned in standard authorities.

Throughout the year, three hours.

COURSE II. — The Rennaissance and the Reformation. Lectures and text-book. The text-book work is based on Symond's A Short History of the Renaissance and Hausser's The Period of the Reformation, 1517-1648. This course will be given in alternate years with Course III.

Throughout the year, three hours.

Given in 1905-6.

COURSE III.—The French Revolution and Europe during the Nineteenth Century. The first half of the year is devoted to the French Revolution and the Napoleonic Regime. Lectures and text-book. The text-book work is based on H. Morse Stephens' European History, 1789–1815, and Rose's The Revolutionary and Napoleonic Era. The last half of the year is devoted to a study of England, France, Germany, and Italy since the Congress of Vienna. Fyffe's Modern Europe is used as a basis. Lectures and reports by students on assigned readings in standard authorities.

Throughout the year, three hours.

Given in 1904-5.

COURSE IV.— History of England from Teutonic origins to the Nineteenth Century. Lectures and text-book. The text-book

work is based on Gardner's Students' History and Green's Short History of the English People, and references are required in the constitutional histories of Stubbs, Hallam, and Taswell-Langmead. This course alternates with Course V.

Throughout the year, two hours.

Given in 1904-5.

COURSE V. — The Political and Constitutional History of the United States, from 1781 to 1861. This course continues throughout the Senior year. The sources are extensively used as found in the government publications, the writings and addresses of statesmen, and the contemporary interpretation of national affairs. The text-book work is taken from Fiske, Walker, Hart, and Wilson. Lectures and reports by students on assigned readings in Von Holst, Schouler, McMaster, Rhodes, and the American Statesmen series.

Throughout the year, two hours.

Given in 1905-6.

Latin Language and Literature.

The courses in the Latin department are intended to direct the student to a systematic study of the language and its development; to acquaint him through a varied reading of the best authors with the leading features of the literature, and to make him familiar with the main facts of Roman life and civilization. Technical Grammar and Composition are studied only in so far as they contribute to the comprehension of the language.

The instruction is given by means of recitations supplemented by lectures, and, in the elective courses, by individual research.

COURSE I. — Cicero, *De Senectute,* with selections from *De Amicitia* for rapid and sight reading; Livy, Books XXI-XXII; Velleius Paterculus, Book II. Weekly exercises in prose composition based on the texts read.

This course includes a detailed review of Latin case structure and syntax, and a specific effort is made to teach right habits of

reading and translation. In connection with Livy is made a careful study of the geography of Spain and Italy and of the history of Rome during the Second Punic War. Attention is also directed to the literary characteristics of Livy and of his age.

Throughout the year, four hours.

COURSE II. — **Horace,** selected *Odes, Epodes, Satires,* and *Epistles;* Plautus, one play; Terence, one play.

The more common metrical structures are studied so that the Latin can be read with ease. Especial attention is directed to Horace's literary and political life and to as much of the history of the period as sheds light on the subject matter. In connection with the translation of Plautus and Terence, the course includes lectures on the origin and development of comedy in Rome and on the Roman Theatre. The plays are also made a basis for the investigation of syntactical problems.

Throughout the year, three hours.

COURSE III. — **Tacitus,** *Annals* Books I-II; Letters of Pliny and Cicero; Quintilian, *Institutions* X.

The character of Tiberius and the upbuilding of the principate are studied by collateral readings from Suetonius and Velleius Paterculus. The letters of Cicero and Pliny are used as a basis for studies in Roman private life. In connection with Quintilian is taken up the origin of Roman literary forms.

This course alternates with Course IV. Open to those who have completed Course II.

Throughout the year, three hours.

Given in 1904-5.

COURSE IV. — **History of Latin Literature.** Lectures are given, alternating with illustrative readings in both Latin and English, from various authors studied. Fowler's *Latin Literature* is used, with assigned work in Cruttwell and Teuffel.

This course alternates with Course III. Open to those who have completed Course II.

Throughout the year, four hours.

Given in 1905-6.

COURSE V. — **Latin Literature in English.** This course consists of the lectures, text-book work, and English readings of Course IV. It may be elected by students of any course.

Throughout the year, two hours.

Given in 1905-6.

COURSE VI. — Roman Philosophy. Cicero, *Tusculan Disputations,* Book I; Lucretius, *De Rerum Natura,* Books I, III, V.

The purpose of this course is to give a general knowledge of the whole field of ancient philosophy, with a careful study of the Stoic and Epicurean systems. Lectures are given, supplementing Mayor's *Ancient Philosophy* and Zeller's *Stoics, Epicureans,* and *Sceptics.*

This course alternates with Course VII. Open to those who have completed Course II.

Throughout the year, two hours.

Given in 1905-6.

COURSE VII.—Introduction to Latin Epigraphy; Roman Topography.

In Epigraphy, lectures and exercises are given, based on Egbert's Latin Inscriptions. During the latter part of the year, a study of the topography, architecture, and monuments of Rome is made.

This course alternates with Course VI. Open to those who have completed Course II.

Throughout the year, two hours.

Given in 1904-5.

Mathematics.

Extended courses in pure and applied mathematics are offered, the work done being such as will be of the greatest value in mental discipline, and in the application of the subject to Science and Engineering.

COURSE I. — Algebra. The Binomial Theorem, Variables and Limits, Series, Determinants, Theory of Equations, Logarithms.

Geometry.—Conic Sections.

Fall term, four hours.

Trigonometry.—Functions of Acute Angles, the Right Triangle, Goniometry, the Oblique Triangle.

Winter term, four hours.

Trigonometry, the right Spherical Triangle, the Oblique Spherical Triangle, Applications of Spherical Trigonometry.

Spring term, four hours.

COURSE II. — Analytic Geometry. Construction and Discussion of Equations, the Straight Line, Circle, Ellipse, Parabola, and Hyperbola. General Equation of the Conic Section.

Fall term, three hours.

Construction of Conics from their Equations, Tangents and Normals, Conics referred to Oblique Axes, Higher Plane Curves.

Differential Calculus. — Introductory Theorems, Differentiation of Explicit Functions, Transcendental Functions, Successive Differentiation, Development of Continuous Functions.

Winter term, three hours.

Evolution of Illusory Forms, Maxima and Minima, Functions of Two or More Variables.

Integral Calculus. — Type Forms, General Methods of Transformation, Successive Integration, the Constant of Integration, Geometrical Applications.

Spring term, three hours.

COURSE III. — An advanced course in Higher Mathematics, taking up such subjects as are agreed upon by the class and the instructor.

Throughout the year, two hours.

Philosophy.

The aim of this department is to secure for the student habits of philosophic thought, and to enable him to come to a right knowledge of himself and his relations to nature, to his fellow-men, and to God. Text-books are used only as guides. Emphasis is put on the necessity of independent investigation and independent thought.

COURSE I. — Psychology. A general introduction to the subject. The text-book, Sully's Outlines of Psychology, is supplemented by informal lectures, assigned readings and papers on special topics.

Fall term, four hours.

COURSE II. — Ethics. A brief survey of the history of ethical thought is followed by a critical examination of the chief ethical systems of modern times, with the view of arriving at the really valid principles that underlie human conduct. These principles

are then critically applied to the various institutions and natural relations of human life.

Winter term, four hours.

COURSE III. — Christian Evidences. The true nature of Christianity is defined, its relation to philosophy and to other religious systems is considered at some length, and modern arguments against it are refuted.

Spring term, four hours.

COURSE IV. — History of Philosophy. A study of the chief philosophers and philosophic systems of ancient and modern times. Weber's History of Philosophy is used as a text-book.

Fall term, four hours.

Given in 1905-6.

COURSE V. — Theory of Thought and Knowledge. An inquiry into the general nature and conditions of thought, a study of proof and the most important logical fallacies, and a consideration of philosophic scepticism, of realism and idealism and of apriorism and empiricism.

Winter term, four hours.

Given in 1905-6.

COURSE VI. — Philosophy of Religion. Chief attention is here given to the idea of God. The traditional arguments for the existence of God are critically examined and the attempt is then made to show that the theistic conception of the world is a necessary postulate of reason and that all atheistic systems are suicidal.

Spring term, four hours.

Given in 1905-6.

Physics.

The leading idea in the instruction given in this subject is to prepare the student for independent research, upon the theory that such method affords the highest mental discipline and the most satisfactory practical knowledge. Each student, furnished with sufficient material and apparatus to enable him to do so, will pursue his own investigations under such guidance as will secure precision in method and accuracy in results. Illustrated lectures will frequently

be given to make the path clear and the labor interesting and successful.

The College has complete facilities for obtaining a thorough elementary knowledge of this subject. The costly and splendid apparatus, kept up to the times by occasional additions, makes this subject unusually attractive and satisfactory.

Physics.

COURSE I. — Class work, illustrated lectures, experiments. Fall term, Mechanics; Winter term, Electricity; Spring term, Hydraulics, Heat, Light, and Sound. Open only to those who have completed Mathematics I.

Throughout the year, three hours.

COURSE II. — Advanced work in experimentation. All branches of the subject are closely studied by original problems and investigation. Open only to those who have completed Mathematics II.

Throughout the year, three hours.

Political Science.

This subject is offered to those who have completed one year's work in History. Political theories and principles, ancient, mediæval and modern, are examined, as illustrated in the rise and fall of nations and in the evolution of constitutions. American politics and international relations receive concentrated study in alternate years.

COURSE I. — Comparative Politics. This course is historical as well as comparative in method. It begins with a study of the state, its origin, development, forms and ends, and an examination into the governments of ancient Greece and Rome and of mediæval times. Then follows a study of the development and a comparison of the present constitutions of England, France, Germany, and the United States. The work is based on Wilson's The State, and Burgess's Political Science and Comparative Constitutional Law.

Fall and Winter terms, three hours.

COURSE II.—International Law. This alternates with Course III. The text-book is that of General G. B. Davis, the required work of the United States service. Special examination of the Treaties and Conventions and diplomatic history of the United States is made.

Spring term, three hours.

Given in 1905-6.

COURSE III.—Constitutional Law of the United States. The purpose of this course is to give to those students who cannot take the extended work in the history of the United States some knowledge of the general principles of our constitutional law. The sources of the national instrument are examined and the development of its chief powers is traced. The work is based on the texts of Cooley, Storey and Von Holst, and special attention is given to a few leading cases for illustration.

Spring term, three hours.

Given in 1904-5.

Physical Training.

All students are required to take instruction in the gymnasium. Regular class work is given under the supervision of competent instructors.

For Young Men.—The object of this department is to give the student growth and increase of strength, that of the mind in direct proportion to that of the body; to furnish proper instruction in hygiene; to provide health, strength, and symmetrical development. These objects are accomplished by regular class exercises in the gymnasium during the fall and winter, and on the field in the spring, and by periods of optional work after class hours. Physical measurements and strength tests of all students are taken upon entrance, at the close of the college year, and at such intervals as seem necessary. This forms the basis of comparison of the student's condition and needs, and determines the character and amount of

exercise necessary to overcome marked deficiencies, irregular development, or such deformities as are amenable to physical exercise.

Students will receive personal advice in reference to habits of life, exercise, study, and recreation; also suggestions pertaining to personal hygiene, etc.

The work is designed to be progressive and is divided accordingly.

Fall Term.— Swedish work, military gymnastics, elementary club swinging, wand and dumb bell drills, principles of heavy gymnastics, development of college gymnasium team; gymnastic exhibition at close of term.

Winter Term. — Continuation of former work, advanced club swinging, heavy gymnastics, indoor athletics, gymnastic games; basket ball; inter-class indoor athletic meet, and inter-class basket ball at close of term.

Spring Term. — Continuation of former work, track and field athletics; tennis, base ball, outdoor gymnastic and athletic games; inter-class base ball and inter-class track and field athletic meet in May or June. All students are required to take the light gymnastics, which are of such a character as to meet the average needs and not over-tax the strength of any student who is in a physical condition to undertake college work.

NOTE.—For the welfare of the students it is required that all who take gymnasium work, or desire to use the privileges of the gymnasium, should first submit to a physical examination by the Director.

An examination and measurement is offered each student yearly and a record of the results is kept for reference.

FOR YOUNG WOMEN.—The aim of the work is to acquire a symmetrical development of the body as a basis for health and grace. The training is based upon Delsarte Philosophy of Expression, and the Swedish and German systems of free movements and light gymnastics.

Required Work

In the Various Courses of Study.

For graduation in any course all work specified as required must be completed, and in addition thereto work selected from the general list of electives sufficient to make a total of not less than one hundred eighty term-hours. "Term-hour" signifies one hour recitation weekly for one term.

Sixteen recitations a week is the regular number, but the Registrar may assign seventeen. Application for a larger number must be approved by the Registration Committee. In no case will additional hours be allowed except on the basis of previous high grade work.

In the following tables Arabic numerals denote the number of hour recitations per week—i. e., the number of term-hours. Roman numerals refer to the courses of instruction detailed on pages 23 to 48, where may be found full description of the character of the work.

Notes on the Required Work.

NOTE.—In the Classical. Latin and Modern Language, and English and Modern Language Courses, two years of science are required. Choice of two subjects must be made from Biology I, Chemistry I, Physics I.

NOTE II.—In the Latin-Scientific Course two of the following subjects must be taken: Biology II. (or III.), Chemistry II., Physics II.

NOTE III.—Students that offer German instead of French for admission will take French I. and II. instead of German I. and II., as scheduled.

NOTE IV.—Students in the Civil Engineering Course who do not care to take the higher technical work may take Biology II. or III. in place of such work in the Junior year and Philosophy in place of such work in the Senior year.

Classical Course.

FRESHMAN YEAR.	FALL TERM.	WINTER TERM.	SPRING TERM.
Latin I	4	4	4
Greek I	4	4	4
Mathematics I	4	4	4
English I	4	4	4
SOPHOMORE YEAR.			
Latin II	3	3	3
Greek II	3	3	3
English II	3	3	3
German I	4	4	4
Science [See Note I., page 49.]	3	3	3
JUNIOR YEAR.			
History I	3	3	3
Philosophy I., II., III	4	4	4
Science [See Note I., page 49.]	3	3	3
Elective	4	4	4
SENIOR YEAR.			
Elective	14	14	14

Latin-Scientific Course.

FRESHMAN YEAR.	FALL TERM.	WINTER TERM.	SPRING TERM.
Latin I	4	4	4
Mathematics I	4	4	4
Biology I	3	3	3
English I	4	4	4
Graphics Ia	1	1	1
SOPHOMORE YEAR.			
Mathematics II	3	3	3
English II	3	3	3
Chemistry I	3	3	3
German I	4	4	4
Science [See Note II., page 49]	3	3	3
JUNIOR YEAR.			
Physics I	3	3	3
Geology I	4	4	.
Astronomy I	.	.	4
Science [See Note II., page 49]	3	3	3
Philosophy I., II., III	4	4	4
SENIOR YEAR.			
Elective	14	14	14

Latin and Modern Language Course.

FRESHMAN YEAR.	FALL TERM.	WINTER TERM.	SPRING TERM.
Latin I	4	4	4
German I [See Note III., page 49]	4	4	4
Mathematics I	4	4	4
English I	4	4	4
SOPHOMORE YEAR.			
Latin II	3	3	3
German II [See Note III., page 49]	4	4	4
English II	3	3	3
History I	3	3	3
Science	3	3	3
JUNIOR YEAR.			
Philosophy I., II., III	4	4	4
Science [See Note I., page 49]	3	3	3
Elective	7	7	7
SENIOR YEAR.			
Elective	14	14	14

English and Modern Language Course.

FRESHMAN YEAR.	FALL TERM.	WINTER TERM.	SPRING. TERM.
German I [See Note III., page 49.]	4	4	4
French III	3	3	3
English I	4	4	4
Mathematics I	4	4	4
SOPHOMORE YEAR.			
German II. [See Note III., p. 49.]	4	4	4
English II	3	3	3
Elocution II	2	2	2
History I	3	3	3
Science. . [See Note I., page 49.]	3	3	3
JUNIOR YEAR.			
English III	3	3	3
History II. or III	3	3	3
Philosophy I., II., III	4	4	4
Science. . [See Note I., page 49.]	3	3	3
Elective	2	2	2
SENIOR YEAR.			
Elective	15	15	15

Civil Engineering Course.

FRESHMAN YEAR.	FALL TERM.	WINTER TERM.	SPRING TERM.
Mathematics I	4	4	4
Graphics I., II	4	4	.
Engineering I	.	.	4
English I	4	4	4
German I	4	4	4
SOPHOMORE YEAR.			
Mathematics II	3	3	3
Graphics III	4	4	4
Chemistry I	3	3	3
English II	3	3	3
German II	4	4	4
JUNIOR YEAR.			
Graphics IV., V. [See Note IV. p. 49]	3	2	.
Engineering II., III. [See Note IV., page 49]	.	2	4
Chemistry II	3	3	3
Physics I	3	3	3
Geology	4	4	.
Astronomy I	.	.	4
SENIOR YEAR.			
Engineering IV., V. [See Note IV., page 49]	4	4	4
Physics II	3	3	3
Elective	7	6	6

List of Electives.

The following list of elective studies includes all subjects that are elective in any of the courses of study. Some of the subjects are required in one or more of the courses of study, but are elective in others. The list is open to students of all courses under the conditions named below. Each student will select from the list sufficient work to make, in connection with the required work of his course, not less than fourteen hours a week.

Conditions.

1. The student must be fully prepared for the work.

2. He must avoid all irreconcilable conflicts in hours.

3. So far as possible all required work below his rank must be completed before advanced electives are chosen. This rule may be waived in cases where it is necessary in order that the student may be ready for a particular line of work in the latter part of his course.

4. A subject once selected must be pursued to completion—or to the end of the year. Partial courses of instruction will not be counted in the one hundred eighty term-hours required for graduation.

5. The student must have a definite plan in the choice of his elective work.

6. The faculty reserves the right to disapprove choice of electives.

The Arabic numerals refer to the number of hour recitations per week; the Roman numerals refer to the detailed description of the courses of instruction found on pages 23 to 48.

SUBJECTS.	FALL TERM.	WINTER TERM.	SPRING TERM.
Astronomy I	.	.	4
Astronomy II	3	3	.
Biology I	3	3	3
Biology II	3	3	3
Biology III	3	3	3
Biology IV	4	4	4
Chemistry I	3	3	3
Chemistry II	3	3	3
Chemistry III	3	3	3
Economics I	3	3	3
Economics II., III	.	2	2
Elocution II	2	2	2
Elocution III	2	2	2
Elocution IV	1	1	1
English III	3	3	3
English IV	2	.	.
English V	.	2	2
English VI	2	.	.
English VII	.	2	2
Engineering I	.	.	4
English Bible II	.	3	3
English Bible III	3	3	3
French I	4	4	4
French II	4	4	4
French III	4	4	4
Geology	4	4	.
German II	4	4	4
German III	3	3	3
German IV	3	3	3

SUBJECTS.	FALL TERM.	WINTER TERM.	SPRING TERM.
Greek III	3	3	3
Greek IV	2	2	2
Greek V	2	2	2
Greek VI	4	4	4
Greek VII	2	2	2
Hebrew	4	4	4
History I	3	3	3
History II	3	3	3
History III	3	3	3
History IV	2	2	2
History V	2	2	2
Latin II	3	3	3
Latin III	3	3	3
Latin IV	4	4	4
Latin V	2	2	2
Latin VI	2	2	2
Latin VII	2	2	2
Mathematics II	3	3	3
Mathematics III	2	2	2
Philosophy IV., V., VI	4	4	4
Physics I	3	3	3
Physics II	3	3	3
Political Science I	3	3	.
Political Science II	.	.	3
Political Science III	.	.	3

Equipment.

The Physical Laboratories.

The department of Physics occupies six rooms in Wilcox Hall of Science. These rooms are furnished with all the conveniences for experimental work, water, gas, electric currents, dark rooms, and other necessary equipment for the study of physics. The basement is fitted with steam engine, lathes, drill press, and machinery which enable the instructors and students to construct such special apparatus as may be needed in investigation. This department is well supplied with apparatus for investigating the phenomena and measuring the constants of dynamic forces, sound, heat, light, and electricity. The effort is made to stimulate every student in the department to carry his work outside the lecture and the book, and opportunity is given each one who develops talent for the work to carry his investigations on experimentally.

The Observatory.

Few colleges are better equipped with astronomical apparatus. The large telescope has a nine-inch objective made by Brashear, of Allegheny, Pa. A smaller instrument, made by Alvin Clark & Son, is mounted for the special use of students. This has a clear aperture of seven and one-half inches. The

large telescope has a Warner & Swasey mounting and is fitted with every convenience for accurate work. A transit, two chronometers, three sextants, a chronograph, and a siderial clock form, with the telescope, the entire equipment. The clock is the gift of the children of Milton B. Goff, LL. D., an alumnus, and formerly professor of mathematics in this college, in memory of their father. The observatory and its instruments are used by students in astromony. Also opportunity for sight-seeing is given to other students and to visitors who desire.

The Chemical Laboratories.

The department of Chemistry occupies the second floor of Wilcox Hall. It contains the qualitative and quantitative laboratory, with accommodations for thirty-five students, the balance room, store room, and professor's office and private laboratory. The laboratories are well lighted, conveniently arranged, and well supplied with all the necessary apparatus and equipment.

The Biological and Geological Laboratories.

The Biological and Geological laboratories occupy the western end of Bentley Hall and consist of a recitation room, a store room, and a large laboratory. In suitable cases there are placed the study collection of animals, a set of paleontological speciments, the Educational Series of Rocks from the Smithsonian Institution, and a very complete local herbarium. The collections are illustrated by a set of Leuckart's wall charts, botanical models, diagrams, etc. Recently the laboratory has been entirely refitted with

laboratory tables of a very convenient design. The department library is placed in an accessible part of the laboratory and contains at present a well selected library of one hundred and fifty volumes. The laboratory is equipped with microscopes, microtome, and all other needed apparatus for embryological, histological and bacteriological work.

Engineering Apparatus.

In Mathematics and Engineering all necessary instruments for illustrating pure and applied mathematics are provided and are in practical use by the students in those subjects.

The Museum.

The Museum embraces several distinct collections of minerals, shells, fossils, etc.

1. The Prescott Collection, comprising 2,200 specimens of Marine, Terrestrial, and Fresh Water Shells, and about 3,000 specimens of Minerals and Fossils, was collected and mounted by Dr. William Prescott.

2. The Haldeman Collection has 550 excellent and carefully labeled specimens of Minerals, and about 2,000 specimens of Shells, and was purchased by S. S. Haldeman.

3. The Alger Collection.—This collection, made by Francis Alger, contains 5,000 specimens of Minerals, remarkable for their beauty and variety. It embraces also a large number of duplicates, and a handsome cabinet of about 1,500 specimens of shells.

4. Cabinet of Lithology and Palaeontology.—This contains an entire series of the well known Ward Casts, and a very comprehensive and valuable collection of Fossils and Rocks, to which additions are being made.

5. Smithsonian Collection.—In addition to several valuable collections heretofore obtained from the Smithsonian Institution, there have been added over 500 specimens of Land, Marine and Fresh Water Shells from Panama, Vancouver's Island, and the

West Indies, chiefly obtained by Prof. C. A. Adam and authentically labeled by H. Cumming and Dr. P. Carpenter, from the collection of D'Orbigny and Cumming.

6. Natural History Collection.—In addition to the above named collections there are about 1,000 Zoological Specimens, including Birds, Reptiles, Fish and Marine Animals, which are constantly being increased in number by the exertion of the friends of the department.

These collections greatly increase the scientific advantages of the College and furnish special incentives to the study of Natural Science.

Library and Reading Room.

The College Library contains more than 16,000 volumes, many of them rare and valuable works. More than seventeen hundred volumes have been added the last year. Department libraries have been established and have attained considerable proportions. They are an important feature of the work in all of the literary courses. Technical and reference books are being added as fast as possible. The Reading Room provides for the students a wide range of periodical literature. Complete files of all the best magazines are continually kept on hand.

During the last year gifts have been received as follows: From J. W. Matthias, of the class of '58, Haddam, Kansas, 298 volumes. From J. C. Sturgeon, of Erie, 16 volumes of valuable old English law books, including Hobart's Reports. From Durbin Horne, of Pittsburg, 50 volumes for the scientific department library.

The Free Public Library of Meadville excellently supplements the facilities of the College Library, particularly in the lines of general reference books and current fiction.

General Information.

College Fees.

All students pay an incidental fee of $15 a term, and a gymnasium fee of $2 a term.

In the Laboratories each student in Chemistry I. pays $2.50 a term for use of chemicals and apparatus, and in Chemistry II. and III., $5. In Biology I., a fee of $1 a term is charged, in Biology II. and III., a fee of $2 a term, and in Biology IV., a fee of $3 a term is charged to cover the cost of material. In the second term of Geology, a fee of $1 is charged.

Students in Scientific Drawing pay a fee of $1 per term.

Students in the Civil Engineering Course and those who elect any of the technical subjects of that course pay a fee of $5 in addition to the term fee.

Living Expenses of Young Men.

The most important item in the expenses of a student is the cost of living. Every effort has been made to reduce the living expenses as low as possible, and at the same time secure everything that is necessary for health and comfort.

The College does not provide room and boarding for young men, but will render all possible aid to students in securing comfortable homes. Good furnished rooms for two cost each occupant from fifty cents a week upward. This includes care and light.

The young men of the College board in clubs or

in private families, the latter costing about one-third more than the former. The cost of good table board is in this way reduced to from $2.00 to $2.50 per week. Provided the student have a room-mate, the estimate for the necessary expenses, based upon good club board, is as follows for a term of twelve weeks:

LOW.

Term fee	$15.00
Gymnasium fee	2.00
Room Rent, Fuel and Light	7.00
Table Board	24.00
Books	3.00
Total	$51.00

LIBERAL.

Term fee	$15.00
Gymnasium fee	2.00
Room Rent, Fuel and Light	15.00
Table Board	36.00
Books	7.00
Total	$75.00

Expenses other than those enumerated depend largely on the student's tastes and habits, and the College does not undertake to estimate them. For the items mentioned the figures given are exact. Few students will have occasion for spending more than $75 a term. This, of course, does not include traveling expenses, clothing, or luxuries. An economical student can live on $60 a term; indeed, each year several students spend less than this and yet live comfortably. The only caste in the College is based on good conduct and good work.

Living Expenses of Young Women.

HULINGS HALL.

Allegheny College is a co-educational institution. It furnishes to young women the highest educational

advantages open to young men and also the best features of a distinctively woman's college, among them a refined and comfortable home. In Hulings Hall it is aimed to furnish an ideal college home for young women. The Hall is in charge of a competent and accomplished Preceptress, who devotes her whole time to the interests of the home, and whose influence is constantly felt in the social, moral, and religious development of the young women under her charge.

Young women not living at home or with relatives are required to live in Hulings Hall. Applicants for admission to the Hall are reminded that the purpose of residence there is not social but educational. They are supposed to be young women of fixed principles and elevated aims. The regulations are not artificial or arbitrary, but such as are considered essential to the ends for which the Hall is maintained. All proper freedom is accorded, but the authorities of the College reserve the right to decide what proper freedom is. A copy of the Regulations for the government of the Hall will be furnished on application.

The rooms are furnished with beds, mattresses, pillows, chairs and tables. The rates, including heat and light, are as follows: In the main corridor, on the second floor, rooms are $30 each for one term; on the third floor, $25 each. In the rear corridor: second floor, $20; third floor, $15. Where two persons occupy a room the rate for each is one-half the above amount. Room rent is payable at the opening of each term. Rooms may be reserved in advance by the payment of a deposit of half the rate for the term. Table board is $35 a term.

Each young lady should bring with her the following articles: Sheets, pillow cases and bed covering, towels, napkins, knife, fork and spoons.

Aid to Students.

SCHOLARSHIPS.—The College has no scholarships, but it is able to grant aid of various sorts that serves the same purpose.

SELF-HELP.—Young men help themselves in several ways. About thirty of the present students are earning their expenses in whole or in part. Ten or twelve are employed in light work connected with the College or the boarding clubs. Some find in town opportunities for work of various kinds. Others are serving churches in the neighborhood of Meadville. It is the policy of the College to help students that help themselves.

THE LINDLEY ENDOWMENT.—By the will of the late Miss Lucy Lindley, of Meadville, the College received the sum of ten thousand dollars, the interest of which is used to assist students dependent upon their own efforts to obtain an education. Application for aid from this fund should be made to the President. It should be remembered, however, that only a limited number of students can be aided in this way.

BALLANTYNE SCHOLARSHIP FUND.—Thirty thousand dollars has recently been given to the College by Mrs. Hettie F. Ballantyne, of Pittsburg, in memory of her late husband,to be known as the *James Alexander Ballantyne Scholarship Fund.* The income of this fund is to be used to pay the college term fees, and in cases of need, certain other expenses, of the sons and daughters of ministers of the Pittsburg Con-

ference, and of young men of said Conference who are studying for the ministry. This fund is administered by the officers of the College Faculty. Application should be made to the President.

Educational Society Loans.—Students who are members of the Methodist church, showing promise of usefulness in any form of Christian activity, may secure loans from the Educational Society on the recommendation of their home Quarterly Conference. These loans are without interest and need not be paid until two years after graduation. It is supposed by many that these loans are offered only to candidates for the ministry. Such is not the case. They are offered to all needy and worthy students. The loans are made by the society on the recommendation of the faculty.

No aid from the above mentioned funds, or from any other source, is given to students who use tobacco.

A student having received aid from any of the College funds will be given a letter of dismissal to enter another college only after all such aid shall have been returned.

Candidates for the Ministry.

The College does not offer a course in theology, nor does it profess to take the place of a theological seminary. It does help the student for the ministry to lay broad and strong foundations for special study in theology. In addition to the courses usually given in colleges, there are offered courses in the English Bible, New Testament Greek, and Hebrew.

Religious Culture.

The College was founded by Christian men for the promotion of Christian culture. It believes that education should always include, as its highest aim, the development of Christian character. It seeks to surround the student with such influences and helps as foster the religious life. Chapel services are held each morning and all students are required to be present. Regular attendance on Sunday mornings at some church, selected by the student or his parents, is also required. Prayer meetings are held Wednesday evening of each week. The results are manifest in the quickening and strengthening of many in the religious life. Religious services, under the care of the Young Men's Christian Association of the College, are held on Monday evening of each week in their hall. On Sunday evening the Young Women's Christian Association holds its regular meeting in the parlor of Hulings Hall. The students' Christian Associations also conduct religious services weekly in several places in the city and surrounding region. In this way the students are brought into religious association and become familiar with various forms of religious activity.

The religious influence of the College is not in any sense sectarian, but Christian. On the rolls this year are representatives from sixteen Christian denominations.

The aim is to make the moral and religious life of the College such that the student will be under as helpful influences here in Meadville as he would be in his own Christian home.

The Weekly Holiday.

The weekly holiday is on Monday instead of Saturday.

This plan has been in use for several years, and is greatly preferred by teachers and students. It has obvious advantages and is particularly adapted to the wants of students in towns adjacent to Meadville—within forty or fifty miles—who desire to spend Sunday at home. The railroads furnish mileage tickets at reduced rates, and a deduction is made in most cases for absence from the boarding tables. The cost of spending Sunday at home is in this way made small. This plan is commended to the attention of parents who may be so situated as to be able to avail themselves of its obvious advantages.

Literary Societies.

There are two Literary societies for young men—the Allegheny and the Philo-Franklin—and the Ossoli Society for young women. The societies have their respective halls, the libraries aggregating about 3,000 volumes. These societies render the College efficient service in the literary and forensic training of students, and the society friendships are invaluable to the members. While membership in a literary society is not required, it is earnestly recommended to every student.

Clubs.

The Classical Club, composed of the instructors in the classical department and advanced students to the number of about twenty-five, meets for the discussion of papers submitted by members on lines of classical investigation.

The Quill Club is an organization to encourage and to regulate publication in the interests of the College. The membership includes the editorial boards of the Allegheny Literary Monthly and of the Campus, a weekly newspaper, also college correspondents for the local press and for out of town papers.

The Scientific Club meets weekly to discuss abstracts of current scientific papers or to listen to the presentation of the original research of some of the members. The club includes members of the faculty and students in the college who are interested in scientific work.

Prizes.

In addition to essays and oration prizes offered by the literary societies, two prizes are open to competition by students of the College classes.

The Wakefield Oration Prize.—Mr. James W. Wakefield, of Pittsburg, furnishes a prize of fifty dollars, in the name of his grandfather, Rev. Samuel Wakefield, D. D., awarded in March of each year, to the young man delivering the best oration. The winner of this prize represents the College in the Tri-State Oratorical League Contest held in May.

Class of Ninety Oration Prize.—The class of '90, which consisted of forty-two persons, has established a prize of forty-two dollars to be awarded annually to the young man or woman delivering the best oration at a contest held in the spring term.

Lectures.

In addition to the regular work of the departments special lectures are given from time to time by mem-

bers of the faculty on a variety of subjects. Courses of lectures are also given by men outside the faculty. These lectures deal with a wide range of subjects and are of great service in supplementing the regular department work.

Music.

The Pennsylvania College of Music was established for the purpose of affording superior advantages for the study of Music in all its higher branches. The courses of study pursued are similar to those of the successful schools of music in Europe and America, and are calculated to make cultured, thoroughly competent and skillful musicians of the graduates; also to give them a system for their use when they in turn wish to become professional teachers. A catalogue giving full information as to the work done may be had on application to the Director.

A limited amount of music is allowed as an elective in the English and Modern Language Course.

Important Regulations.

Excuses for Absence.—For absence from town, necessitating absence from any college duties, a written excuse must be secured from the President, before the absence, if possible. No absence from class can be excused except on presentation to the instructor of this written excuse of the President.

When a special request is made to the President it is understood to be made to the Faculty. The proper form of such request is a written application for the desired excuse, or favor, and this written request should set forth plainly the reasons for it.

EXAMINATIONS.—There are three examinations of classes during the year. The first is held on the last three days of the Fall term; the second on the last three days of the Winter term; the third begins a week previous to Commencement.

A student failing to pass in a subject is entitled to a second examination, if he so desire, at a time to be arranged by the instructor. In case of a second failure or of neglect to apply for a second examination within two weeks of the opening of the next term, the study must be taken over in class.

MARREID STUDENTS.—A student that marries after matriculation and before graduation thereby severs his relations with the College.

The Adviser System.

Each student on registering is assigned to some member of the Faculty, who serves throughout the year as a special counsellor on all matters in which the student finds the need of frank and friendly advice. The relation between adviser and student is intended to be perfectly fraternal, without restraint on either side.

Classification.

The classification of the Catalogue is made in February of the college year, and gives the class rank for the year.

In the Senior class are included those who have completed by February 1, not less than one hundred forty-six term-hours, of the one hundred eighty necessary for graduation.

In the Junior class are included those who have

completed by February 1, not less than ninety-five term-hours.

In the Sophomore class are included those who have completed by February 1, not less than forty-three term-hours.

In the Freshman class are included all who have been admitted to the class during the year.

Graduation.

For graduation all the required work in some one course must be completed, and additional work, selected from the general list of electives, sufficient to make a total of not less than one hundred eighty term-hours.

Every candidate for graduation must present on or before April first of the Senior year an oration satisfactory to the Faculty. In the case of engineering students a thesis on some technical subject is required in place of an oration.

Degrees.

The degree of Bachelor of Arts is conferred upon those who complete in a satisfactory manner one of the three courses, Classical, Latin-Scientific, Latin and Modern Language.

The degree of Bachelor of Letters is conferred upon those who complete in a satisfactory manner the English and Modern Language Course.

The degree of Bachelor of Science is conferred upon those who complete in a satisfactory manner the Engineering Course.

The degree of Master of Arts may be conferred on Bachelors of Arts of this College who have com-

pleted a course of at least three years in length in an approved professional school.

Bachelors of Arts of this College, or of another of equal rank, may pursue in residence work in not more than two distinct lines of study. On the completion of a full year's work, and the presentation of a satisfactory thesis, the degree of Master of Arts will be conferred. Bachelors of Arts of this College may, by vote of the Faculty, be permitted to pursue this work in non-residence, but in that case at least two years must be devoted to it.

Every person receiving a degree from the College will pay a fee of five dollars for diploma.

Form of Bequest.

"I hereby give, devise, and bequeath to Allegheny College, at Meadville, Penn'a., the sum of ———" (or such other property, real or personal, as may be described).

Register of Students.

The small capitals following the names indicate the course of study: C standing for Classical, S for Latin-Scientific, L for Latin and Modern Language, ML for English and Modern Language, and E for Civil Engineering.

Graduate Students.

Candidates for the Degree of Master of Arts.

EDSON, EMMA,.....Meadville
A. B., Allegheny College.

MERCHANT, JESSIE,.....Meadville
A. B., Allegheny College.

PALM, ADA BELLE,.....Meadville
A. B., Allegheny College.

TAYLOR, ROBBINS NEWTON,.....Meadville
A. B., Allegheny College.

TUHOLSKI, MARIE ANNETTE,.....Erie
A. B., Allegheny College.

Seniors.

BENN, ARTHUR BATES, C.....Meadville
BREENE, SARAH LOUISE, C.....Corry
CONOVER, FRED, E.....Meadville
DEWEY, MALCOLM HOWARD, C.....Meadville
DUTTON, BESSIE MAY, L.....Meadville
FOSTER, DAISY ESTELLE, L.....Meadville
FREEMAN, ROBERT GUTHRIE, C.....Edinburgh, Scotland
GARVER, BLANCHE ROSE, ML.....Meadville
HAAS, ROBERT VICTOR, E.....Meadville
HAYES, CHARLES ROY, C.....North Hope
HAZEN, ROY WATSON, C.....New Castle

JONES, MARY FRICK, C.....Smithton, W. Va.
KINCAID, BLAINE S., L.....Corry
LEET, CLARA BELLE, C.....Greenville
LEWIS, HOMER ERNEST, C.....Smicksburg
LOWTHIAN, ELVIN, S.....Delaware, Ontario
MCCARTNEY, FRANK BERT, E.....Meadville
MCCLINTOCK, HELEN ELIZABETH, L.....Meadville
MANSELL, HARRY BEESON, S.....Upper Middletown
MILLER, WILLIAM, JEWART, L.....Apollo
MERRILL, RICHARD NYE, C.....Buffalo, N. Y.
NELSON, JAMES GAYLE, C.....Conneaut Lake
ROBERTS, MARY, ML.....Meadville
SAXMAN, ALBERT CLARENCE, L.....Putneyville
SHEPARD, ROY FOSTER, E.....Penn Line
SMITH, CHARLES LAVENS, S.....Franklin
SMITH, HARRY LESTER, C.....Pitcairn
SNEARLINE, ALBERT JOSEPH, L.....Meadville
STOCKTON, FRED EVERETT, C.....Meadville
STOCKTON, HERBERT JOHN, C.....Meadville
STREET, JAMES GLENN, L.....Corry
STRICKLER, FREDERICK WINEMAN, E.....Derry Station
TAYLOR, ARAVILLA MEEK, ML.....Andes, N. Y.
TERRY, LOUISE WINIFRED, C.....Corry
THOMAS, RUTH, C.....Union City
TROSH, WALTER SCOTT, L.....Oil City
TURNER, HARRY ALLEN, E.....West Hickory
WILCOX, WARREN FERDE, C.....Cherry Creek, N. Y.

Juniors.

Appleby, Mabel Blanche, L.....Tarentum
Ballantyne, James Van Horne, ML.....Derry Station
Baker, Frank Elmer, S.....Clymer, N. Y.
Boyd, Alexander Samuel, C.....Pittsburg
Cowles, Clifford, E.....Asheville, N. Y.
Dewey, Katherine Deniston, L.....North East
Farr, Cinnett Grant, C.....Fayettville, W. Va.
Fitzgerald, Jennie, L.....Mt. Pleasant
Fornear, Thomas, C.....Willock
Frost, Frank Raymond, E.....Meadville
Harrison, Anna Jeanette, C.....Meadville
Hassler, James Herman, E.....Meadville

Hewitt, Wilber Jay, C.....Meadville
Hotson, William, E.....Meadville
Howe, Charles Preston, C.....Tarentum
Johnston, Lettie Love, L.....Pittsburg
King, Claude Hurst, C.....Ripley, W. Va.
Larder, Frank, E.....Sinclairville, N. Y.
Lewis, Walter Davis, C.....Smicksburg
McArthur, Fred Henry, S.....Meadville
Morrison, Joseph Emil, C.....Blairsville
Ohlman, Frank Max, E.....Meadville
Pollock, Hazard John, ML.....Espyville
Reynolds, Fred Combs, C.....New Castle
Roberts, Gertrude, S.....Buckhannon, W. Va.
Ross, George A., S.....Cambridge Springs
Rowley, George Henry, C.....Greenville
Scott, Herbert Moore, C.....Moundsville, W. Va.
Van Riper, Benjamin Whitman, S.....Meadville
Van Slyke, Clarence Allen, L.....Centralia, N. Y.
Wood, Harley John, C.....Waterford
Wright, Bruce Simpson, L.....Jamestown, N. Y.
Wynn, Wesley Akers, E.....Derry Station

Sophomores.

Bolard, David Albert, S.....Philadelphia
Calvin, Joseph Mac, L.....Meadville
Canfield, Ethel, L.....Cambridge Springs
Comfort, Albert Wilkins, C.....Pittsburg
Crawford, John Raymond, C.....Meadville
Crissman, Jessie Cessna, L.....West Newton
Darrow, Floyd Lavern, S.....Lakewood, N. Y.
Davenport, Levi Orton, S.....Albion
Dye, Claude Russel, C.....South Dayton, N. Y.
Edmonds, Cecil Kay, C.....Meadville
Gallup, Georgia Bernice, L.....Meadvillle
Gartner, LeRoy George, E.....Meadville
Gaston, Phylinda Elise, ML.....Meadville
Giblyn, John Richmond, L.....Watertown, N. Y.
Giele, Nora Hildegarde, L.....Meadville
Gleason, Walter William, E.....Johnsonburg
Harper, Robert Carl, E.....Meadville
Hart, Henry Paxton, S.....Meadville

Hunter, Jesse Merton, E.....Hartstown
Hyskell, Ira David, C.....Smicksburg
Lockwood, Marion Merchant, E.....Meadville
Lotz, Anna Laura, L.....Kinsman, O.
McDivitt, Joshua Kennedy, L.....Andes, N. Y.
McIntier, Charles Andrew, E.....Corry
McLaughlin, Margaret, C.....Corry
McQuiston, William Jenkins, L.....Atlantic
Merrill, Charles Coburn, C.....Buffalo, N. Y.
Mitchell, Paul, S.....Indiana
Ottaway, Adelaide C., L.....Sherman, N. Y.
Reavley, Albert Addison, C.....Buffalo, N. Y.
Rider, Virginia, ML.....Buckhannon, W. Va.
Rossiter, Ben, E.....Meadville
Rowley, Edith, L.....Dunkirk, N. Y.
Scott, Clifford John, L.....Meadville
Scouten, Roy William, C.....Tidioute
Shaffer, Frederic, S.....Cochranton
Silver, Thomas Hammond, Jr., L.....Wellsville, O.
Stone, Harry E., C.....Corry
Sturtevant, Watkin Powell, C.....Conneautville
Swanson, Louis William, C.....Tidioute
Trego, Dorothy Carroll, L.....Meadville
Thompson, Frank Meredith, C.....Canonsburg
Tribby, Fred N., E.....Meadville
Wilson, Charles Alphonso, L.....Allegheny
Wilson, Nellie Gertrude, L.....Union City
Wilson, Robert Forest, C.....Cleveland, O.
Young, Harold M., S.....Mayville, N. Y.

Freshmen.

Abbott, Herbert Newell, E.....Erie
Amy, Howard Delroy Abram, S.....Deckard
Adams, Katherine Moore, L.....Meadville
Aiken, Claude, E.....Butler
Baker, Wynona Marie, C.....Greenville
Bates, Florence Lucile, L.....Randolph, N. Y.
Berkey, Iva, C.....Ligonier
Brock, Mary Electa, L.....Meadville
Carroll, Henrietta Josephine, L.....Meadville
Clark, Arvin Chester, E.....Cleveland, O.

Church, Gaylord, S.....Meadville
Cozins, Mary Rachel, C.....Sheakleyville
Courtenay, Amy Valliant, L.....Zanesville, O.
Davis, Homer Bell, L.....Kennerdell
Deane, Mabel Evelyn, L.....Bridgeport, Conn.
Dice, Carrie Bingham, L.....New Castle
Doane, Morse Ellis, E.....Meadville
Drake, Daniel Bloomfield, E.....Cambridge Springs
Etter, Elizabeth Katharine, C.....East Greene
Fish, Fernando Temple, E.....Conneautville
Flaugh, Frank Calvin, E.....Meadville
Foster, Edna Lovisa, L.....Pleasantville
Fowler, Ethel Clarinda, L.....Meadville
Fowler, Jennie Mildred, L.....Meadville
Gartner, Dan Arthur, E.....Meadville
Gaston, Martha Gertrude, L.....Meadville
Glenn, George, E.....Tidioute
Googe, Charles Michael, E.....Johnsonburg
Griggs, Clarence Harry, E.....Falconer, N. Y.
Haight, Charles Francis, S.....Perrysburg, N. Y.
Hamm, Harry Hess, S.....Knox
Hartung, Charles A., C.....Evans City
Hastings, Arthur, E.....Meadville
Hawk, James Finley, S.....Petrolia
Hayes, Ella Marian, L.....Waterford
Heilman, Fred Lee, E.....Greenville
Henry, Clarence, S.....Wesleyville
Hewit, Forest Arba, S.....Meadville
Horn, Kenneth, E.....Wilkinsburg
Hotson, Charles Marshall, E.....Meadville
Hull, Harold H., ML.....Greenville
Irwin, Ralph Edward, L.....Meadville
Johnson, Hattie Olivia, L.....Jamestown, N. Y.
Jones, Harry Max, E.....Strattanville
Jones, Olin Clarke, C.....Andover, O.
Kelley, Elijah Wilson, C.....Versailles
Kelsay, Harriet, L.....Meadville
Kightlinger, Ralph Blaine, E.....Meadville
King, John William, C.....Munhall
Knapp, Frank L., L.....Paulding, O.
La Bounty, Francis Louis, C.....Ashtabula, O.
Leffingwell, Benjamin Douglas, S.....Kinsman, O.

Lynch, Mary Elizabeth, C.....Corry
McAlister, Katherine May, C.....Irwin
McClintock, Walter John, L.....Meadville
McDowell, Horace Hammon, ML.....Pittsburg
McKinney, Joseph Morris, E.....Hebron, W. Va.
McKinney, Ralph Garfield, L.....Franklin
McLaughlin, Frank Harry, L.....Springboro
Mack, Walter Scott, E.....Andover, O.
Mackey, William Thompson, C.....Meadville
Main, William Robert, S.....Titusville
Marhofer, Anna Eleanore, L.....Meadville
Martin, George Granville, E.....Warren, O.
Mason, William Orrin, E.....Warren
Miller, Benjamin Franklin, E.....Mount Pleasant
Miller, Frank Purl, L.....Conneaut Lake
Milliren, Effie Alberta, L.....Reynoldsville
Miner, Wallace Herman, C.....Meadville
Mook, Roy H., ML.....Marion, Ind.
Morse, Mabel Irena, L.....Richmond Center, O.
Mossman, Robert Gillis, S.....Greenville
Myers, Rolland, E.....Johnstown
Palm, Lorena Gladys, L.....Meadville
Pettengill, Edna Holdsworth, L.....Corry
Phillips, Clayton Charles, C.....Waterford
Phillips, Nathan Harley, S.....Waterford
Purdy, Charles Dorland, C.....Palmyra, N. Y.
Rees, Raymond Sigler, C.....Pittsburg
Reilley, Minniedell, L.....Osceola, Wis.
Robertson, Andrew Wells, L.....Panama, N. Y.
Roueche, Francis William, E.....Meadville
Russell, Robert Wolcott, ML.....Wilkinsburg
Seybolt, James Marsena, E.....Meadville
Shryock, Edward Osborne, E.....Meadville
Small, James Arner, E.....Nebraska
Stockton, Frank Tenney, C.....Meadville
Stuntz, Ross Maxwell, C.....Edinboro
Taft, William Sanders, L.....Youngsville
Tillotson, Gustav Kletsch, E.....Greenville
Turner, Matthew, C.....Braddock
Weber, Floyd Porter, E.....Meadville
Wilson, Virginia, C.....Corry
Zuck, Floyd John, ML.....Erie

Special.

Arnold, Turner Schuitte.....Clarion
Boyd, Harry Clayton.....Union City
Darrow, Ethel Cole.....Lakewood, N. Y.
Hampson, Harriet Mary.....North East
Martin, Elizabeth Fairman.....Kane
Oberlin, Ellis Anson.....Ringgold
Silver, Harriette Moore.....Wellsville, O.
Vosler, Ray.....Greenville
West, Mabel Elizabeth.....Corry
Wilson, Samuel.....Clarion
Worcester, Charles Winchell.....Lebanon, N. H.

Summary.

Resident Graduates	5
Seniors	38
Juniors	33
Sophomores	47
Freshmen	94
Special	11
Total	228

The list of students in the Preparatory School connected with the College is given in a separate catalogue.

Degrees Conferred June 18, 1903.

Doctor of Divinity.

Horace Mann Conaway
Frank Melville Kerr.

Master of Arts.

Horace McKinney
Frank B. Miner
Edwin W. Janes.

Bacheler of Arts.

Alice M. Alcorn
James Howard Anderson
Marion Bemis
Maude Alice Blair
Carroll Luther Chase
Charles Bishop Croxall
Mae Cecilia Dreutlein
Willis Hayes Franklin
Harry Gustavus Harris
Mary Ten Broeck Heydrick
Clara Belle Leet
Caleb McCune
LeVerne Aldin Marsh
Clara May Miner
Ada Belle Palm
Evangeline Parsons
Florence Peck
James Garfield Pentz
Martha Peterson
Helen Erma Rogers
Orton Ray Smiley
Russell Clarence Smith
Ebenezer Wilson Springer
James J. Squier
Edith Steffener
Florence Stem
William Herbert Taylor
Alice Lillian Thomas
Nina Ruth Townley
Marie Annette Tuholski
Lewis Alfred Whittaker
Jessie Alice Williams
Benjamin Frank Williamson
Ralph Waldo Emerson Yeany.

Bachelor of Letters.

Eugene Forbes Craig
Charles Maxson Freeman
Charles E. Kearney
Andrew G. Williams.

Bachelor of Science.

George Seiple Davenport
William Jefferson Dillon
Stuart Wilson Jackson
Jay Earle Kelley
Samuel Christian Lampe
Thomas Franklin Lininger
Virgil Milburn McConnell
Frederic Echols Smith
John Henry Sporr
John Tordella.

CALENDAR FOR 1904-1905.

June 10, 11, 13, 14.....Examinations
12, Sunday, 10:45 a. m.....Baccalaureate Sermon
By President WILLIAM H. CRAWFORD.
7:45 p. m., Annual Sermon before College Young Men's Christian Association.
13, 14, Monday and Tuesday, 9:00 a. m., Entrance Examinations.
13, Monday, 8:00 p. m.....Inter-Society Contest
14, Tuesday, 2:00 p. m.....Class Day Exercises
3:00 p. m...Annual Meeting of Board of Control
3:30 p. m.....Phi Beta Kappa Anniversary
5:00 p. m...Business Meeting of Phi Beta Kappa
15, Wednesday, 9:00 a. m.....Annual Meeting of Board of Trustees.
1:00 p. m., Meeting of Alumni Association—Annual Dinner.
8:00 p. m.....Glee Club Concert
16, Thursday, 10:00 a. m.....Commencement Exercises

Summer Vacation.

September 19, 20, 1904.....Entrance Examinations
September 20, Tuesday.....Fall Term Begins
December 15, Thursday.....Fall Term Ends

Winter Vacation.

January 3, 1905, Tuesday.....Winter Term Begins
January 26, Thursday.....Day of Prayer for Colleges
March 23, Thursday.....Winter Term Ends

Spring Vacation.

April 4, Tuesday.....Spring Term Begins
June 22, Thursday.....Commencement

Allegheny College Preparatory School.

This school is under the direct control and supervision of the college authorities, but has its own building and a distinct corps of instructors.

It aims to prepare students for college with a minimum expenditure of time. It is realized that many students looking forward to a college course are precluded by age or by lack of early advantages from taking a regular four years' course in academy or in high school. Young men and women of maturity can by thorough application fit themselves for college in less time than is necessary for younger and less mature persons. Earnest and capable younger pupils may also in some cases gain time in fitting for college. The work is systematic and thorough and every effort is made to enable the student to work to the best advantage. Under certain limitations students may take a part of their work in college classes. Students registered in the college also who are deficient in certain subjects can pursue these studies under skilled instruction and with every facility for accurate and thorough work.

All instruction is given by college graduates, teachers of thorough preparation and successful experience.

Full particulars, including lists of the instructors and students, are found in the catalogue of the school, a copy of which will be sent on request.

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SERIES IV., No. 1
FEBRUARY, 1905

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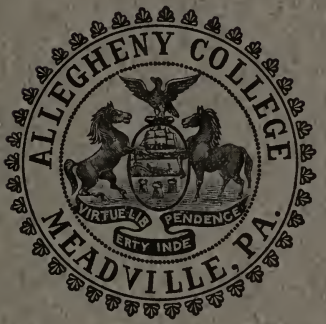
CATALOGUE

1904-1905



ALLEGHENY COLLEGE

FOUNDED IN 1815

NINETIETH YEAR

CATALOGUE

OF

ALLEGHENY COLLEGE

FOR

1904-1905

WITH ANNOUNCEMENTS FOR

1905-1906

MEADVILLE, PA.
1905

THE ALLEGHENY COLLEGE BULLETIN

PUBLISHED QUARTERLY
BY THE COLLEGE

Entered as second-class matter in the postoffice at Meadville, Pa.

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CALENDAR.

1905.

April 4, Tuesday—Last day for Presenting Senior Orations and Theses.

13, Thursday, 8:00 p. m.—Wakefield Oration Contest.

May 10, Wednesday—Choice of Senior Speakers.

25, Thursday, 8:00 p. m.—Class of Ninety Oration Contest.

30, Tuesday—Memorial Day, a holiday.

June 9, 10, 12, 13—Senior Examinations.

16, 17, 19, 20—Second Term Examinations.

18, Sunday, 10:45 a. m.—Baccalaureate Sermon, by President William H. Crawford.

7:45 p. m.—Annual Sermon before the Christian Associations, by Bishop Henry W. Spellmeyer, D.D.

19, 20, Monday and Tuesday—Entrance Examinations.

19, Monday, 8:00 p. m.—Glee Club Concert.

20, Tuesday, 2:00 p. m.—Class Day Exercises.

3:00 p. m.—Annual Meeting of the Board of Control.

4:00 p. m.—Annual Meeting of Phi Beta Kappa.

8:00 p. m.—Phi Beta Kappa Address, by Rev. William F. Anderson, D. D.

9:00 p. m.—Reception by President and Mrs. Crawford.

21, Wednesday, 9:00 a. m.—Annual Meeting of the Board of Trustees.

1:00 p.m.—Meeting of the Alumni Association. Annual Dinner.

7:30 p. m.—Organ Concert, by William C. Carl.

9:00 p. m.—Fraternity Banquets.

22, Thursday, 10:00 a. m.—Commencement Exercises.

SUMMER VACATION.

1905.

Sept. 20, Tuesday—First Term Begins.
19, 20, Monday and Tuesday—Entrance Examinations.
20, Tuesday—Registration of New Students.
21, Wednesday—Registration of Old Students.
22, Thursday, 8:00 a. m.—Recitations Begin.
Nov. 1, Wednesday—Last Day for Submitting Subjects of Senior Theses.
30, Thursday—Thanksgiving Day, a holiday.
Dec. 15, Friday, 12:30 p. m.—Recitations Close.

CHRISTMAS RECESS.

1906.

Jan. 3, Wednesday, 8:00 a. m.—Recitations Resumed.
9, Tuesday—Last Day for Presenting Senior Theses.
25, Thursday—Day of Prayer for Colleges.
Feb. 29 } Monday to Friday—First Term Examinations.
2 }
2, Friday, 4:00 p. m.—First Term Ends.
6, Tuesday—Second Term Begins. Registration.
7, Wednesday, 8:00 a. m.—Recitations Begin.
10, Saturday—Last Day for Submitting Subjects for Senior Orations and Theses.
22, Thursday—Washington's Birthday, a holiday. The College Dinner.
March 30, Friday, 12:30 p. m.—Recitations Close.

EASTER RECESS.

April 11, Wednesday, 8:00 a. m.—Recitations Resumed.
12, Thursday—Last Day for Presenting Senior Orations and Theses.
8:00 p. m.—Wakefield Oration Contest.
May 10, Thursday—Choice of Senior Speakers.
24, Thursday, 8:00 p. m.—Class of Ninety Oration Contest.
30, Wednesday—Memorial Day, a holiday.
June 8, 9, 11, 12—Senior Examinations.
14, 15, 16, 18, 19—Second Term Examinations.
21, Thursday—Commencement.

Allegheny College was organized in 1815 and chartered in 1817. The corporate title is THE PRESIDENT AND TRUSTEES OF ALLEGHENY COLLEGE.

The governing powers are vested in the Board of Trustees and the Board of Control. The members of the former are elected for a life term from nominations made by the Board of Control. The latter body consists of two ministers and two laymen chosen yearly by each of four annual conferences of the Methodist Episcopal Church—viz: The Pittsburg, Erie, East Ohio, and West Virginia Conferences. It nominates for all vacancies in the Board of Trustees or in the Faculty.

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*Deceased.

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* * * *

Professor of Modern Languages.

*Deceased August 11, 1904.

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Catalogue.

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Library.

PROFESSOR KNUDSON — PROFESSOR SMITH
PROFESSOR LOCKWOOD

DESCRIPTION OF THE COLLEGE.

Historical Sketch.

Allegheny College was founded in 1815 by citizens of Meadville, then a frontier village of some four or five hundred inhabitants. The first president was Rev. Timothy Alden, a Presbyterian preacher and teacher. The institution was chartered in 1817 and in 1820 the corner stone of the first building, Bentley Hall, was laid. In 1831 a strong appeal was made to the Presbyterian church to take the College under its patronage, but the request was refused, owing to the fact that the Presbyterians already had two colleges in Western Pennsylvania. The refusal of this appeal was followed by the resignation of President Alden. In 1833, through the activity of Rev. Homer J. Clark, the College came under the control of the Pittsburg Annual Conference of the Methodist Episcopal Church, and Rev. Martin Ruter, D. D., was elected president. By successive divisions of the Pittsburg Conference, the control is now vested in the Pittsburg, Erie, East Ohio, and West Virginia Conferences. While the College is under denominational control, the contract between the Conferences and the Trustees, who represent several religious denominations, guarantees a liberal and unsectarian spirit in its management.

Location.

Allegheny College is situated in Meadville, Pennsylvania, on the main line of the Erie, and Bessemer & Lake Erie Railroads. An electric road gives direct

connection with Erie and intervening points. The population is over 11,000; it is an old and well established town with attractive streets and residences, cultured society, and many educational influences. As Meadville is largely a residence town it has few of the disadvantages of city life. It has most of the advantages of a city, such as paved streets, an effective sewerage system, an abundant supply of wholesome water from driven wells, recently installed, arc and incandescent electric lights, illuminating and natural gas, and an electric street railroad connecting all parts of the town with the college grounds.

The surrounding country is remarkable for its beautiful and diversified scenery. Within a short radius are some twenty miles of ravines of wild and rugged beauty, and the foothills of the Alleghenies which surround the town make the situation one of great attractiveness. The neighborhood is especially rich in material for the study of Botany and Geology.

Buildings and Grounds.

The college campus contains sixteen acres on the north edge of the town, nearly a mile from the business section, having an elevation of 200 feet above French Creek and 1,200 feet above the sea. It is abundantly shaded by numerous varieties of trees, many of them planted by students nearly a century ago. The ravine which passes through the campus and the situation overlooking the town and the valley for miles below, give a natural beauty hardly surpassed. The grounds are well provided with granolithic walks, and both grounds and buildings are kept in an attractive and sanitary condition.

The heating plant, situated in the upper ravine, sup-

plies steam heat to all the college buildings. It is entirely adequate to the needs of the College.

Bentley Hall bears the name of Rev. William Bentley, D. D., of Salem, Massachusetts, who gave his valuable library to the College. The corner stone was laid in 1820. It is an impressive example of colonial architecture, consisting of a central three-story building with tower, and two wings with massive pillars. The building contains the administrative offices of the college, recitation and lecture rooms, and the biological laboratories. The third floor is devoted to the halls of the literary societies with their libraries.

Ruter Hall, which bears the name of Rev. Martin Ruter, D. D., the second president of the College, is a substantial brick building, erected in 1855, chiefly by the citizens of Meadville. It contains the zoological and geological museums of the college and the recitation rooms and assembly room of the Preparatory School.

Hulings Hall, a four-story brick building, ninety-four by eighty feet, was erected in 1881, by Mr. Marcus Hulings, of Oil City, and citizens of Meadville. It is used as a home for young women, and accommodates about sixty. The building is well lighted and ventilated, is provided with fire escapes, and is in thoroughly good sanitary condition. It has recently been almost entirely refurnished.

Wilcox Hall of Science, named for Mr. and Mrs. Robertson Wilcox, of Girard, Pa., is a modern brick building built in 1892, for the departments of Physics and Chemistry. It contains an amphitheatre lecture room, seating one hundred twenty-five students, chemical and physical laboratories, and basement work

shop. There are ten working rooms. In the construction of the building especial care was taken to provide abundant light.

The Gymnasium, erected in 1896, adjoins the athletic field. It is in the early Italian style of round arched architecture, and is constructed of native stone and brick. The building is T-shaped in form, the front portion being two stories high, exclusive of the tower. The first floor contains the director's room, locker rooms, and baths. On the second floor are the assembly and committee rooms of the Young Men's Christian Association. The gymnasium floor, which occupies the rear extension, has a clear space of forty-five by eighty feet unobstructed by pillars, the roof and running track being suspended from steel trusses. The building is equipped with the appointments of a first class modern gymnasium.

Newton Observatory, completed in 1901, was made possible by the gift of Mrs. Mary M. Newton, of Batavia, Illinois, in memory of her husband, Captain D. C. Newton, once a student in the College. It is a rock-faced stone building of fine architectural appearance, containing in addition to the observing room, a transit room, a computing room, and the director's office. It is equipped with a telescope, with a nine-inch objective made by Brashear, of Allegheny, Pa., and with a smaller instrument, with a seven and one-half inch aperture, made by Alvin Clark and Son, mounted for the special use of students. Other equipment includes a transit, two chronometers, three sextants, a chronograph, and a siderial clock. The clock is the gift of the children of Milton B. Goff, LL. D., in memory of their father, an alumnus and formerly professor of mathematics in the College. The mount-

ings and other fixtures of the observatory were supplied by Messrs. Warner and Swasey, Cleveland, Ohio.

Ford Memorial Chapel was erected in 1901-2 through the generosity of Captain John B. Ford, of Creighton, Pa., in memory of his wife. The cost of the building was $34,000. It is of rock-faced Cleveland sandstone, in Gothic Romanesque style, with a spacious auditorium seating four hundred fifty, besides a gallery seating one hundred fifty, and an oratory seating one hundred fifty. The rich stained glass windows and the harmonious interior appointments add much to the stateliness of the building.

The chapel has been provided with a splendid pipe-organ by the granddaughters of Captain Ford, Mrs. J. A. Ballantyne and Misses Nellie and Stella Ford, who contributed $6,000 for this purpose. The organ was designed by Mr. W. L. Mayer, of Pittsburg, and was built by the late Julius Neef, of Philadelphia. It has three manuals and 1,920 pipes, and is supplied with the best devices of great modern organs.

The Library Building, the gift of an anonymous donor, was completed in 1902 at a cost of over $40,000. Its dimensions are eighty-five by seventy-four feet, and it is constructed of vitrified brick with terra cotta trimmings, in Italian-Renaissance style. In addition to the stack room with a capacity of sixty thousand volumes, it contains a cataloguing room, librarian's rooms, general reading room, and a large reference reading room. On the second floor are the faculty room and departmental seminar rooms. The interior appointments of the library are entirely in accord with the artistic character of the building.

Laboratories and Museum.

The Physical Laboratory. The department of Physics occupies six rooms in Wilcox Hall of Science, designed expressly for the purpose. These rooms are furnished with all the conveniences for experimental work, water, gas, electric currents, a complete projection apparatus with a large collection of slides, dark rooms, and other necessary equipment for the study of physics. The basement is fitted with steam engine, dynamo, lathes, drill press, and machinery, which enable the instructors and students to construct such special apparatus as may be needed in investigation. The department is well supplied with apparatus for investigating the phenomena and measuring the constants of dynamic forces, sound, heat, light, and electricity, and with instruments of precision for investigation as well as instruction. Effort is made to stimulate every student in the department to continue his work outside the lecture and the book.

The Chemical Laboratory. The department of Chemistry occupies the entire second floor of Wilcox Hall. It contains the qualitative and quantitative laboratory, with accommodations for thirty-five students, the balance room, store room, and the professor's office and private laboratory. The laboratories are well lighted and ventilated, conveniently arranged, and well supplied with necessary apparatus and equipment. Each student's table is provided with gas and water. The department library is also located here.

The Biological and Geological Laboratories occupy the western end of Bentley Hall and consist of a recitation room, a store room, and a large laboratory. In suitable cases there are placed the study collection of

animals, a set of paleontological specimens, the Educational Series of Rocks from the Smithsonian Institution, and a very complete local herbarium. The collections are illustrated by a set of Leuckart's wall charts, botanical models, diagrams, etc. Recently the laboratory has been entirely refitted with laboratory tables of a very convenient design. The department library is placed in an accessible part of the laboratory and contains at present a well selected library of one hundred fifty volumes. The laboratory is equipped with microscopes, microtome, and all other needed apparatus for embryological, histological, and bacteriological work.

Among other things which have been added to the equipment of the laboratory during the past year are a Bausch and Lomb microscope with 1-12 oil immersion lens, a set of wax models illustrating the development of Amphioxus, and a collection of insects arranged to show their protective coloring and mimicry.

Engineering Apparatus. In Mathematics and Engineering all necessary instruments, such as transits, levels, rods, and chains, for illustrating pure and applied mathematics are provided and are in practical use by the students in those subjects.

The Museum embraces several distinct collections of minerals, shells, fossils, etc.

1. THE PRESCOTT COLLECTION, comprising 2,200 specimens of Marine, Terrestrial, and Fresh Water Shells, and about 3,000 specimens of Minerals and Fossils, was collected and mounted by Dr. William Prescott.

2. THE HALDEMAN COLLECTION has 550 excellent and carefully labeled specimens of Minerals, and about 2,000 specimens of Shells, and was purchased by S. S. Haldeman.

3. THE ALGER COLLECTION.—This collection, made by Francis Alger, contains 5,000 specimens of Minerals, remark-

able for their beauty and variety. It embraces also a large number of duplicates, and a handsome cabinet of about 1,500 specimens of Shells.

4. Cabinet of Lithology and Paleontology.—This contains an entire series of the well known Ward Casts, and a very comprehensive and valuable collection of Fossils and Rocks, to which additions are being made.

5. Smithsonian Collection.—In addition to several valuable collections heretofore obtained from the Smithsonian Institution, there have been added over 500 specimens of Land, Marine, and Fresh Water Shells from Panama, Vancouver's Island, and the West Indies, chiefly obtained by Prof. C. A. Adam and authentically labeled by H. Cumming and Dr. P. Carpenter, from the collection of D'Orbigny and Cumming.

6. Natural History Collection.—In addition to the above named collections there are about 1,000 Zoological Specimens, including Birds, Reptiles, Fish, and Marine Animals, which are constantly being increased in number by the exertion of the friends of the department.

These collections greatly increase the scientific advantages of the College and furnish special incentives to the study of Natural Science.

The museum is open every Saturday, while the College is in session, from three to five p. m. At other times visitors are admitted on application to the custodian.

Library and Reading Room.

The Library contains more than sixteen thousand volumes, many of them rare and valuable works. Department libraries have been established and have in the last few years attained considerable proportions. In addition to the general library expenditures each department has a liberal annual appropriation which provides the best and most modern technical and reference books. To these libraries and to the refer-

ence library students have free access, and thus early become familiar with the correct use of books and acquire something of the bibliographic sense. The reference library and reading room are open at convenient hours daily except Sunday. From the general stacks books may be drawn under the usual necessary regulations. The Reading Room provides for students a wide range of periodical literature, both technical and general.

The periodical list includes the following:

American Naturalist.
American Journal of Sociology.
American Journal of Archaeology.
American Journal of Philology.
American Chemical Journal.
Atlantic Monthly.
Biblical World.
Biological Bulletin.
Botanical Gazette.
Bookman.
Century.
Chautauquan.
Classical Review.
Contemporary Review.
Educational Review.
Education.
Engineering News.
Forum.
Fortnightly Review.
Harper's Magazine.
Harper's Weekly.
Health Culture.
International Quarterly.
Independent.
Journal of Geology.
Journal of Chemical Society.
Literary Digest.
Leslie's Monthly.
Missionary Review.
McClure's Magazine.
Mind.
Modern Language Notes.
North American Review.
Nineteenth Century.
Outlook.
Popular Science Monthly.
Public Opinion.
Science.
Scribner's Magazine.
Scientific American and Supplement.
World's Work.

In addition, the Library is well supplied with daily and weekly newspapers, religious and secular.

Each of the literary societies has in its own rooms a library of about twelve hundred well selected vol-

umes, which may be withdrawn for home use by members.

In addition to the above libraries, students have free access to the Meadville Public Library, which has a good collection of works of general reference and literature and current fiction.

GENERAL PURPOSE.

This institution is a college, not a university. The controlling purpose is to prepare its graduates for any kind of professional study. It does not undertake to fit a student to enter upon any profession without special study. The experience of the college proves that its graduates are able to distinguish themselves in various professional careers whenever they have added to their college training the special equipment for such professions. This general aim determines the methods of the college in all departments of instruction. The end sought is not exhaustive knowledge of any branch of study, but thorough discipline and correct habits of observation and reflection. It is upon this principle that the courses of study are founded. For the first two years all subjects are prescribed, and they are such as have been found to be best adapted to secure the above ends. In the last two years of the courses a wide range of electives is offered, enabling a student to make more direct his foundation for subsequent professional study. But with few exceptions all subjects are primarily cultural and not technical. By a wise choice of electives a student may in some cases shorten by a year the time required to complete his professional course. One who has this in view is given all needed advice and help.

A large proportion of college graduates enter not upon professional but upon business life. The general principle above stated applies to them with as much force as to those who enter professions. The training

of a college does not teach a man how to do business successfully, but it does prepare him to learn any business rapidly, and to attain large success, if he has the requisite talent.

COURSES OF STUDY.

The College offers three courses of study leading to the degree of Bachelor of Arts and two leading to the degree of Bachelor of Science. The entrance requirements for all courses are equal in amount, and substantially equivalent in character. The requirements in English, Mathematics, History, and Science, are the same for all courses. Work in two foreign languages is required for all courses, but for the Bachelor of Science courses advanced work in Mathematics, Biology, Chemistry, or Physics may be substituted for part of one language. The details for the entrance requirements for each course are given on the following pages.

The Bachelor of Arts Courses.

1. **The Classical Course** closely adheres to the ideal of the old college course, founded upon thorough work in the ancient languages, English, and History, with enough Mathematics and Science to insure symmetrical mental development, and with a wide range of electives, enabling a student to do special work in favorite lines.

2. **The Latin and Modern Language Course** is identical in purpose and matter with the Classical Course except that modern languages are substituted for Greek.

3. **The Latin-Scientific Course** includes a wide range of scientific work, together with a liberal proportion of culture studies. It is adapted to the needs of those students who desire a course based upon the

humanities, leading to the degree of Bachelor of Arts, but laying particular stress upon scientific subjects.

The Bachelor of Science Courses.

1. **The Scientific Course** emphasizes particularly mathematical and scientific studies, and furnishes a well-rounded equipment for further scientific studies or for the numerous new pursuits opened by modern invention and science.

2. **The Civil Engineering Course** is intended for those who desire to fit themselves for some branch of civil engineering work. It is adapted to the needs both of those who will go immediately into practical work and of those who will pursue advanced technical studies.

Special Students.

Persons desiring to pursue studies in the College are, as a rule, required to be prepared to enter the Freshman class as candidates for some one of the degrees. Under exceptional circumstances, however, persons who are not candidates for a degree may be admitted as special students and allowed to pursue selected studies. Every such person will be required to satisfy the Faculty that he is prepared to do, with profit, the work which he selects. Each case will be decided on its own merits.

REQUIREMENTS FOR ADMISSION.

All subjects required for admission to any of the courses of study are arranged in Groups, which will be found described in detail on the following pages. In all of the groups other authors and other works than those specified will be accepted if fully equivalent in quantity and character.

The particular groups required for admission to each of the several courses will be found designated on page 32.

Groups.

I. ENGLISH.—1. *Reading and Practice.* A limited number of books are assigned for reading. The candidate is required to present evidence of a general knowledge of the subject-matter of these books, and to answer simple questions on the lives of their authors. The form of examination will usually be the writing of a paragraph or two on each of several topics, to be chosen by the candidate from a considerable number—perhaps ten or fifteen—set before him in the examination paper. The treatment of these topics is designed to test the candidate's power of clear and accurate expression, and calls for only a general knowledge of the substance of the books. In place of a part or the whole of this test, the candidate may present an exercise book, properly certified to by his instructor, containing compositions or other written work done in connection with the reading of books. In preparation for this part of the requirement it is important that the candidate shall have been instructed in the fundamental principles of rhetoric.

The books set for this part of the examination will be:—

In 1905—Shakspere's The Merchant of Venice and Julius Cæsar; Addison's The Sir Roger de Coverley Papers in The Spectator; Goldsmith's The Vicar of Wakefield; Coleridge's The Ancient Mariner; Scott's Ivanhoe; Carlyle's Essay on

Burns; Tennyson's The Princess; Lowell's The Vision of Sir Launfal; George Eliot's Silas Marner.

In 1906, 1907, 1908—Shakspere's Macbeth and The Merchant of Venice; Addison's The Sir Roger de Coverley Papers in The Spectator; Irving's Life of Goldsmith; Coleridge's The Ancient Mariner; Scott's Ivanhoe and The Lady of the Lake; Tennyson's Gareth and Lynette, Lancelot and Elaine, and The Passing of Arthur; Lowell's The Vision of Sir Launfal; George Eliot's Silas Marner.

2. *Study and Practice.* A smaller number of books are assigned for more careful study. The examination upon these books covers subject-matter, form, and structure, and also tests the candidate's ability to express his knowledge with clearness and accuracy. In addition, the candidate may be required to answer questions involving the essentials of English grammar, and questions on the leading facts in those periods of English literary history to which the prescribed works belong.

The books set for this part of the examination will be:—

In 1905—Shakspere's Macbeth; Milton's L'Allegro and Il Penseroso, Comus, and Lycidas; Burke's Speech on Conciliation with America; Macaulay's Essays on Milton and Addison.

In 1906, 1907, 1908—Shakspere's Julius Cæsar; Milton's L'Allegro, Il Penseroso, Comus, and Lycidas; Burke's Speech on Conciliation with America; Macaulay's Essay on Milton and Life of Johnson.

II. MATHEMATICS.—Arithmetic, including the Metric system. Algebra, through Quadratic Equations. Geometry, Plane, Solid, and Spherical; eight books of Wentworth's Geometry or an equivalent.

Ordinarily the time spent should not be less than five hour recitations weekly for two full school years.

III. LATIN.—Grammar. The inflections; syntax of nouns and verbs; general sentence structure, including conditional and relative sentences, indirect discourse, and the subjunctive. Prose composition of detached sentences or connected passages based on the texts read. Cæsar, Gallic War, four books. Cicero, seven orations (the Manilian Law to count as two). Vergil, Aeneid, six books. The Roman method of pronunciation is used.

Ordinarily the time spent should not be less than five hour recitations weekly for three full school years.

IV. GREEK.—Grammar. The inflections of nouns and verbs; the principles of the syntax of nouns and verbs; the structure of sentences in general, with particular regard to relative and conditional sentences and to indirect discourse. Prose composition, adapted to test the student's knowledge of grammatical constructions and based on the texts read.

Xenophon: The first four books of the Anabasis and the first two books of the Hellenika. The first three books of Homer's Iliad may be offered instead of the Hellenika.

Ordinarily the time spent should not be less than five hour recitations weekly for two full school years.

V. GERMAN.—Joynes-Meissner Grammar completed; translation of four hundred pages of modern German prose and one classic drama; practice in conversation.

Ordinarily the time spent should not be less than five hour recitations weekly for two full school years.

VI. FRENCH.—Chardenal's Complete French Course completed; Whitney's or Super's or Rollin's French Reader; also six hundred pages of modern prose fiction and four classic dramas translated; practice in conversation.

Ordinarily the time spent should not be less than five hour recitations weekly for two full school years.

VII. HISTORY.—United States, the equivalent of Montgomery's Leading Facts of American History. Eastern Nations and Greece, the equivalent of Botsford's History of Greece. Rome, the equivalent of Botsford's History of Rome. Civil Government, the equivalent of Fiske's Civil Government.

VIII. SCIENCE.—Physical Geography, Davis. Physiology, Walker. Natural Philosophy, Hoadley, with experiments.

More extended work in one or two of the above subjects will be accepted in place of shorter courses in the three. Elementary Biology or Chemistry will be accepted in place of one of the subjects.

Groups Required for Admission.

For admission to the several courses the following groups are required:

Classical Course, I., II., III., IV., VII., VIII.

For Group IV. the student may offer Group V. or Group VI. In that case he will pursue the study of Greek for four years in his college course.

Latin and Modern Language Course, I., II., III., VII., VIII., and V. or VI.

For Group V. or VI. the student may offer Group IV. In that case he will take both German and French in his college course—two years of the former and one year of the latter.

Latin-Scientific Course, I., II., III., VII., VIII., and IV. or V. or VI.

Scientific Course, I., II., III., VII., VIII., and V. or VI.

For Group III. an equivalent amount of work in one modern language may be offered, or work in a modern language equivalent to two-thirds of the Group, and one of the following subjects.

1. Advanced Mathematics, including college Algebra, Conic Sections, Plane and Spherical Trigonometry.
2. Chemistry.
3. Biology—(Zoology, or Botany, or both).
4. Advanced Physics.

The time spent must have been not less than five hour recitations weekly for a full school year. If 2 or 3 or 4 is offered, laboratory work must have formed an important part of the work, and laboratory note books, mounted specimens, and other evidence of the work done, must be presented, all properly certified by the teacher.

Civil Engineering Course. The requirements are the same as for the Scientific Course.

Admission with Conditions.

Students who have not fully completed the subjects specified for the course they wish to enter may be admitted to the Freshman Class conditionally, but not if the sum of their deficiencies exceeds a half year's work, nor if in the judgment of the Registration Committee they are not fitted to do college work to advantage. They will be admitted to such college classes as they may be qualified to enter and will be given an opportunity to remove their deficiencies in the Preparatory School. Under certain fixed restrictions credit may be obtained at entrance for work done in college subjects and such advanced credit may be offset against deficiencies in preparatory work until the latter can be removed.

All admission conditions must be removed before the beginning of the Junior year.

Entrance Examinations.

Examinations for admission are held on Monday and Tuesday of Commencement week, and on Monday and Tuesday preceding the opening of the Fall Term.

All examinations away from Meadville are under direction of the College Entrance Examination Board, whose certificates are accepted in place of examinations in all subjects.

Admission by Certificate.

Certificates for all the work required for admission will be received from approved schools. But students entering by certificate are considered as on trial until the completion of the mid-year examinations, and the right is reserved to require further pre-

paratory work from students who are not able to make satisfactory progress in college classes.

In all cases an examination in English is required, adapted to test the student's power of correct and idiomatic expression. No one will be accepted in English whose work is notably defective in point of spelling, punctuation, idiom, or division into paragraphs.

Principals of schools desiring to be placed on the approved list are invited to address the President.

Diplomas from the Regents of the State of New York will be accepted. All other certificates must be made out on special blanks, which will be sent on application.

The applicant for admission should also bring with him all laboratory note-books, exercise books, mounted specimens, and other evidences of work done, properly certified by the teacher.

All candidates for admission must present satisfactory testimonials of good moral character; and certificates of regular dismission will be required from those who have been members of other colleges.

COURSES OF INSTRUCTION

BY DEPARTMENTS.

In this detailed description of the courses of instruction the number of "hours" refers to the number of hour recitations weekly. Each term is eighteen weeks in length.

All courses are offered yearly, except as specially noted.

Any elective course may be withdrawn if not chosen by at least four students.

Two hours of laboratory work are counted as equivalent to one recitation hour.

Astronomy.

The object aimed at in these courses in Astronomy is two-fold. Course I. is general and is intended to give the student a knowledge of the scope of the science without the solution of the mathematical problems which form such an important part of the advanced work. Course II. takes up such work as the determination of latitude and longitude time and the many other questions relating to the subject.

The department has a large number of lantern slides for illustrating lectures. The Newton Observatory is thoroughly equipped for practical work, and students will be trained in the use of the equatorial telescope and the transit.

COURSE I.—General Astronomy. A general introduction to the subject by means of text-book and lectures.

Second term, three hours.

COURSE II.—Physics and Mathematics of Astronomy; practice in the use of astronomical instruments and the taking of observations. Open to all who have completed Course I. and have had the required mathematical training.

First term, three hours.

Biology.

It is the aim of this department, on the one hand, to give the student a general knowledge of the fundamental facts and principles of Biology; on the other hand, to familiarize him with the methods of investigation in this science as a preparation for advanced work and original research. Courses I., II., III., and IV. are adapted to meet the needs of a general college training. Courses V. and VI. are intended to meet the needs of those who expect to become professional biologists, science teachers in high schools, or physicians. Practical work in the laboratory forms a valuable part of the training of each course.

COURSE I.—Elementary Zoology. A study of historical and systematic Zoology, and the morphology, physiology, development, distribution, and evolution of animals. An attempt is made in this course to give the student a comprehensive summary of the whole science so that he may better understand the biological phenomena which he meets every day. The course is especially planned to meet the needs of those who do not have the opportunity to pursue the subject further, but at the same time it serves as a basis for the more advanced courses in Zoology. The laboratory work consists of the study of the external morphology of a series of typical animals, karyokinesis, histology, embryology of the starfish, etc. Lectures and recitations two hours a week, laboratory work two hours a week.

First term, three hours.

COURSE II.—Elementary Botany. A course in Botany similar to the course in Zoology outlined above except that more attention is given to ecology. The laboratory work consists of the study of a series of typical plants—Spirogyra, Moulds, Mosses, etc. This course forms the second part of Course I. and should be taken the same year, though they may be taken independently. Lectures and recitations two hours a week, laboratory work two hours a week.

Second term, three hours.

COURSE III.—Advanced Zoology. Habits and structures of animals. The laboratory work of this course consists of the careful dissection of at least one type form of each of the great groups of animals. This is followed by a recitation in which the habits of these animals are given. These type forms are then compared with the other closely related animals. Lectures and recitations one hour a week, laboratory work four hours a week. Elective for all who have completed Course I.

Throughout the year, three hours.

Given in 1906-7.

COURSE IV.—Advanced Botany. Plant morphology and physiology followed by a study of all the great groups of the plant world, discussing their essential characteristics and relationships. Lectures and recitations one hour a week. Laboratory work four hours a week. Elective for all who have completed Course II.

Throughout the year, three hours.

Given in 1905-6.

COURSE V.—Vertebrate Histology. Training in the preparation of tissues for examination under the microscope. Each student prepares at least one hundred slides of vertebrate tissues which are later studied and described. This course is especially valuable for teachers or for those intending to study medicine. Laboratory work with occasional lectures, eight hours a week. Elective for all who have completed Course III.

First term, four hours.

COURSE VI.—Vertebrate Embryology. A study of the development of the chick up to the end of the third day. Most of the slides studied are furnished to the students, but each student is required to prepare whole mounts and several sets of serial sections. Laboratory work with occasional lectures, eight hours a week. Elective for all who have completed Course V.

Second term, four hours.

Additional Courses.—Additional courses will be offered, subject to certain limitations, when there is sufficient demand for the work.

Chemistry.

The courses in this department are planned chiefly for a cultural training. The aim is to give the student

a correct idea of the method of reaching scientific results in general and at the same time to lead to independent research both for mental discipline and for the acquirement of real knowledge of the subject. The practical work in the laboratories is emphasized and forms a large part of each course.

COURSE I.—Inorganic Chemistry. The principles of the science in connection with a study of the non-metallic elements and compounds are given in this course. Practice in the writing of chemical equations and in the solution of chemical problems is emphasized. The lectures are illustrated with experiments which are, as far as possible, repeated by the students in the laboratory. Lectures and recitations two hours a week; laboratory work two hours a week.

First term, three hours.

COURSE II.—Inorganic Chemistry. A continuation of Course I. It includes a study of the metallic elements and their compounds, and is introductory to Course III. Lectures and recitations two hours a week; laboratory work two hours a week. Elective for all who have completed Course I.

Second term, three hours.

COURSE III.—Qualitative Analysis. Special attention is given in this course to the analytical reactions of each one of the more common inorganic bases and acids. The more intimate knowledge of the elements and their compounds thus gained enables the student to generalize and classify chemical phenomena. Thorough practice in the separation of metals and acids from each other in unknown liquid and solid mixtures and in the preparation of minerals for analysis is given. Laboratory and lectures six hours a week throughout the year. Elective for all who have completed Course II.

Throughout the year, three hours.

COURSE IV.—Quantitative Analysis. The aim of this course is to give a thorough knowledge of the principles of gravimetric and volumetric analysis, and their applications in the separation and determination of the common bases and acids from salts, minerals, etc. It is of especial value as a training in the more refined methods of manipulation, neatness, and accuracy.

Laboratory and lectures six hours a week throughout the year. Elective for all who have completed Course III.

Throughout the year, three hours.

COURSE V.—Organic Chemistry. A course covering the Chemistry of the hydro-carbons of both the paraffin and benzene series, and their derivatives. Lectures and recitations three hours a week. Elective for all who have completed, or are taking, Course IV.

Throughout the year, three hours.

COURSE VI.—Organic Chemistry. A laboratory course comprising the methods of preparation and purification of a number of typical organic compounds and the detailed study of their properties, reactions, and relations. Six hours of laboratory work a week. Elective for all who have completed, or are taking, Course V.

Throughout the year, three hours.

Economics.

Particular attention is given to the study of the development of economic life and institutions, American conditions being specifically analyzed. Students are made familiar with the accepted principles of the science and are given a practical acquaintance with the complex modern economic organization. Encouragement is also offered to individual research, leading to possible future specialization. Lectures, papers, and comparative examination of various authorities constitute the method of instruction.

COURSE I.—Principles of Economics. Introductory survey of industrial history; Production and Distribution, compassing the accepted elements of the science. The text used is Saeger's Economics, and required readings are assigned in Marshall's Principles of Economics and in the Austrian authorities.

First term, three hours.

COURSE II.—Applied Economics. This is a continuation of Course I. and is a detailed examination of the economic principles applied in trusts, labor, tariff, taxation, and finance.

Social economics as presented in Wright's Practical Sociology is included. Lectures, conferences, papers, and individual investigations are the methods of instruction.

Second term, three hours.

COURSE III.—Economic Theories. History of the development of economic thought including a study of the leading principles of the science as propounded in Adam Smith, Ricardo, Mill, Senior, Menger, Weser, Bohm Bawerk, Walker, and Clark. The seminar method is used. Open to a limited number of those who have completed Courses I. and II.

First term, two hours.

COURSE IV.—Transportation. A course of lectures on the American Railway—a study of railway economics and the problems of government regulation. An extensive use is made of the Inter-State Commerce Commission findings and national industrial data. Open to advanced students.

Second term, two hours.

Engineering.

The instruction in this department covers the technical subjects that lie at the basis of engineering work. Constant use is made of instruments and much of the work consists of actual field work. With the exception of Course I. the subjects are open only to students in the Civil Engineering Course.

ENGINEERING I.—Surveying, with level, transit, and compass. Methods of determining areas. Laying out and dividing land; city surveying; plotting and topographical drawing.

First term, three hours.

ENGINEERING II.—Railroad Engineering. This course includes a reconnaissance, preliminary and location surveys, and estimates for a line of about one mile in length through as difficult a country as is usually encountered. Plots and working drawings.

Second term, three hours.

Since Engineering I. and II. consist largely of field work, students taking them must be careful to arrange their work

in such a way as to leave their afternoons free for such practical work.

ENGINEERING III.—Highway Engineering. Methods of constructing Macadam, Telford, gravel, and earth roads. Wood, stone, brick, and asphalt pavements for cities; and the methods of maintaining country roads and city pavements.

Strength and Resistance of Materials. Foundations on land, on piles, and under water. The building of stone, brick, and concrete masonry. Masonry dams, retaining walls, bridge abutments and piers, culverts, arches, and sewers.

Throughout the year, two hours.

ENGINEERING IV.—Bridges and Roofs. Including analytical and graphical determination of the stresses in bridges and roofs together with a study of actual structures. Designs of a simple roof truss and of a simple highway bridge with working drawings.

Throughout the year, four hours.

English Bible.

The work in this department is intended to open to the student the rich stores of literature contained in the Bible; to familiarize him with the history of the Hebrew people, their civilization, and their influence on the world; and to lead to the critical study of the spirit and form of Hebrew literature as it is shown in the English version. The English Bible is studied as a great monument of our literature and as the source of our knowledge of one of the great civilizations of the world. The courses do not touch questions of doctrine or belief.

COURSE I.—A General Introduction to the English Bible. This course takes up the history of the Hebrew, Greek, and English Bibles, and then passes on to a study of the different types of literature to be found in the Old and New Testaments. Each type is studied as a whole both from the historical and literary points of view, after which examples of each are taken up for more detailed study. The course is an introduction to the

more elaborate courses that follow. It is made up wholly of lectures and reference work, and, since it forms a part of English I., each student is required to keep carefully written note-books, which are at intervals examined by the instructor in English.

Throughout the year, two hours.

COURSE II.—New Testament History and Literature. Stress is here laid on the importance of understanding the political, social, and religious background of the New Testament. To that end the Maccabean and Roman periods of Jewish history are carefully studied. The New Testament literature is treated from the standpoint of its relation to the development of church life and thought rather than from the point of view of literary form.

Throughout the year, two hours.

Given in 1905-6.

COURSE III.—Old Testament History and Literature. The method here pursued is similar to that in the preceding course. The history of Syria and Palestine from the earliest times down to 165 B. C. is first studied. The Old Testament literature is then taken up in the order of its historic development, and its relation to the life, thought, and external history of Israel is brought out. This and the preceding course aim to give a comprehensive grasp of biblical history and literature.

Throughout the year, three hours.

Given in 1906-7.

English Language and Literature.

The aim of this department is to give the student such thorough instruction in the writing of English as will make his language the instrument in his hand for the easy, idiomatic, and energetic expression of his thought; to train him, both by theory and practice, for natural and effective public address; to acquaint him with the essential facts in the development of the English language and literature, and with the great authors who have created that literature; and, finally, to render him sensitive to the literary and aesthetic values of

life. Rigorous and painstaking habits of scholarship are constantly inculcated; but the student is never allowed to forget that literature is vital—that it draws its subject-matter and its inspiration from life, and in turn transmutes the crude and imperfect forms of life into beauty and character.

COURSE I.—The Elements of Rhetoric, and collateral reading. The chief purpose of this course is to train the student in the use of easy, idiomatic English. It is believed that successful instruction in rhetoric depends not so much upon precept as upon example and practice; so the student is encouraged to write freely upon subjects that appeal to him, and that spring naturally from the interests and activities of his daily life. The instructor corrects each paper in detail, and makes appointments with each student for private consultation. The instruction is made extremely flexible, and freshness and variety of method are constantly sought.

Throughout the year, one hour.

Elocution. One hour weekly is devoted to Course I. in Elocution.

English Bible as literature. This work is described under English Bible I.

The above three subjects are scheduled together as English I., and are to be taken at the same time.

Throughout the year, four hours.

COURSE II.—Advanced Rhetoric. A careful study of the four great forms of discourse, Narration, Description, Exposition, and Persuasion The method of instruction is both critical and constructive. Lectures, text-book, and class discussion. Fortnightly themes are required; and provision is made for private consultation with the instructor.

First term, three hours.

COURSE III.—Introduction to English Literature. 1. An outline history of the development of English literature. Moody and Lovett's A History of English Literature. 2. Collateral reading. 3. The study and interpretation, in class, of Shakspere's Hamlet, Milton's Minor Poems, and Pope's Rape of the Lock. Oral recitation, lectures, class discussion, and written tests.

Second term, three hours.

COURSE IV.—English Poetry from 1789 to 1832. Copious readings fom the poetry of Burns, Wordsworth, Scott, Byron, Shelley, and Keats. At the beginning of the year, several lectures are devoted to the setting forth of the historical, social, religious, and literary conditions that gave rise to the literature under consideration. The constant aim is to arouse in the mind of the student an intelligent enthusiasm for the great poetry of the period; and, while holding him to accurate and diligent scholarship, to show him how life and literature interpenetrate.

Elective for all who have completed Courses I., II., and III.

Throughout the year, three hours.

Given in 1906-7.

COURSE V.—The Victorian Period of English Literature. Landor, Carlyle, Tennyson, Arnold, Ruskin, and Browning. Conducted in the same manner as is Course IV., with which it alternates.

Throughout the year, three hours.

Given in 1905-6.

COURSE VI.—Elements of Literary Criticism. Winchester's Principles of Literary Criticism. A systematic inquiry into the essential elements of literature, and a detailed consideration of the various forms of literature. A considerable amount of illustrative reading is expected, and the student is required to test two or three classic productions by a practical application of the principles of criticism.

Elective for all who have taken Course IV. or Course V., and for a limited number who have taken Course III.

First term, two hours.

Given in 1906-7.

COURSE VII.—American Literature. Outlines of its development. Lectures upon representative authors. The critical study and interpretation of masterpieces. Appreciations and essays by members of the class.

Elective under the same conditions as Course VI.

Second term, two hours.

Given in 1906-7.

COURSE VIII.—Prose Fiction. Bliss Perry's A Study of Prose Fiction. The novel, the romance, and the short story. Studies in the structure and significance of these popular forms

of modern English fiction. Illustrative readings and carefully prepared papers.

Elective under the same conditions as Courses VI. and VII.

First term, two hours.

Given in 1905-6.

COURSE IX.—Shakspere. Analytic and interpretative studies of four plays of Shakspere, As You Like It, Othello, King Lear, and The Tempest. A careful reading of Dowden's Shakspere Primer will be required in connection with this course.

Elective under the same conditions as Courses VI., VII., and VIII.

Second term, two hours.

Given in 1905-6.

Expression and Oratory.

The work in this department aims to cover the essential principles of expression with their application, not only to public speaking, but also to every day conversation; to enable the student to secure a correct and refined pronunciation of the English tongue—a distinct utterance, a flexible and melodious voice, and pleasing as well as natural intonations. Since many voices differ in physical structure, it has been found necessary to adapt the work to individual needs, each member of the class receiving special attention in correction of mannerisms and defects. Individuality is considered of the first importance, and the training is not only for a better expression of the thoughts of others, but also to help the student to a clear interpretation of his own impressions.

COURSE I.—Vocal Culture. Thorough drill in the pronunciation of the vowel sounds, articulation, emphasis. Expression. Practice to overcome indistinctness and mannerisms and to secure a pleasing and natural rendition of narrative, descriptive, and

didactic styles. This course forms a part of English I., and as such is required of all students.

Throughout the year, one hour.

COURSE II.—Interpretation of more difficult selections of prose and poetry, a careful study of the masterpieces of English and American orators. Gesture as power in expression.

Throughout the year, two hours.

COURSE III.—A study to secure intelligent and forcible expression of oratorical thought, training in imaginative literature, creative gesture; study of Hamlet, Macbeth, or Lear.

Throughout the year, two hours.

Not given in 1905-6.

COURSE IV.—This course is intended for young men who intend to enter the ministry. Careful attention is paid to extemporaneous speaking, Bible reading, and hymn reading.

Throughout the year, one hour.

Not given in 1905-6.

For Courses III. and IV. an additional fee of $5.00 per term-hour is charged.

French Language and Literature.

In the teaching of Modern Languages no single method is exclusively pursued. An accurate pronunciation in accordance with established phonetic principles is insisted upon, and abundant conversational exercises are carried on in all classes with a view to familiarizing the student with the spoken language. A certain amount of prose composition, designed to afford a more intimate knowledge of the grammatical and syntactical structure of French, is required in all courses. For the more advanced classes frequent exercises in sight-reading and dictation are assigned, and in the last year the instructor lectures in the vernacular upon some phase of literature.

The department aims especially to aid the student to an appreciative interest in French culture, and in-

cidentally to furnish such a knowledge of the history, geography, and social and political condition of this country as goes to broaden the intellectual horizon. The relationship of English to French is carefully pointed out, and special emphasis is placed upon the disciplinary value to be derived from linguistic study.

COURSE I.—Frazier and Squair's French Grammar Reading and translation of easy prose selections, such a text as Mairet's La Tache du Petit Pierre. Composition based upon study and translation of such works as Sand's La Mare au Diable and Merimee's Colomba.

Constant and persistent drill in the pronunciation and grammatical structure of the language and the acquisition of a vocabulary, are the features of the year's work.

Throughout the year, four hours.

COURSE II.—Study of French Literature and literary movements in the seventeenth and eighteenth centuries. The reading and study of four dramas from the works of Corneille, Racine, and Moliere. The study of Descartes, Bossuet, Pascal, La Rochefoucauld, and La Fontaine in copious extracts from their works. Beaumarchais' Le Barbier de Seville. Lectures, for the most part in French, on the literary movement in these two centuries. The preparation of themes and assigned readings from Petit de Juleville's Histoire de la Litterature et de la Langue francaise and other works in the library. A part of the work is devoted to exercises in composition.

Throughout the year, four hours.

Given in 1905-6.

COURSE III.—Study of French Literature and literary movements in the nineteenth century. The Romantic School. Lamartine's Graziella and selections from his poems. Hugo's Preface de Cromwell and Hernani. La Comedie de Moeurs. Two or more plays selected from the works of Dumas fils, Augier, Scribe, Labiche, and Pailleron. The nineteenth century novel in its Romantic, Realistic, and Naturalistic aspects. The study of Dumas, Sand, Balzac, Erckmann-Chatrian, Daudet, and Zola. A part of the work is devoted to exercises in prose

composition. The study of idioms and the syntactical structure of the language is a prominent feature of this course.

Throughout the year, four hours.

Given in 1906-7.

Only three hours credit will be allowed students who take Course II. or III. as a third year's course.

Geology.

The course in Geology is eminently a general culture course, explaining as it does so many common phenomena and leading the student to take a greater interest in natural objects. The class work is supplemented by practical work in the field, museum, and laboratory.

COURSE I.—Structural and Dynamic Geology, as illustrated by the region about Meadville. The field work consists of a number of excursions (usually six) to points of interest in the immediate vicinity. Recitations three hours a week. Elective for all who have completed Chemistry I.

First term, three hours.

COURSE II.—Historical Geology and Paleontology. Chiefly the history and stratigraphy of the North American continent. During this term the laboratory work consists of the study of a series of typical fossils. Recitations two hours a week, laboratory work two hours a week. Elective for all who have completed Biology I. and Geology I.

Second term, three hours.

German Language and Literature.

The aims and methods in this department are essentially the same as for the department of French, as detailed above.

COURSE I.—Fall Term. Vos' Essentials of German Grammar. Reading and translation of Grimm's Marchen. Storm's Immensee with composition based upon the text, and Schiller's Wilhelm Tell.

Great stress is placed upon accurate pronunciation and fluency in reading. The student's ear is trained to familiarity

with German sounds by frequent oral exercises, and by committing short poems to memory.

Throughout the year, four hours.

COURSE II.—Harris' or Wesselhoeft's German Composition once a week. Goethe's Hermann and Dorothea. Freytag's Die Journalisten. Nichol's Three German Tales. Dillard's Aus dem Deutschen Dichterwald. Selections from Freytag's Bilder aus der Deutschen Vergangenheit.

Drill in the elements of syntax and oral exercises are features of this course. At the completion of this course the student is supposed to read German prose of average difficulty at sight.

Throughout the year, four hours.

COURSE III.—A study of the classic period of German literature. Goethe's Faust, Part I. Schiller's Wallenstein, Lessing's Nathan der Weise. Occasional exercises in prose composition. Lectures, for the most part in German, upon the literary developments of the eighteenth century, including an account of the lives and works of the two authors studied in class. Reports upon private readings assigned by the instructor.

Throughout the year, three hours.

Given in 1906-7.

COURSE IV.—A study of German literature and the literary movements in the nineteenth century. Such representative authors as Heine, Kleist, Grillparzer, Otto Ludwig, Scheffel, Wagner, Sudermann, and Hauptmann are read and studied in class. Especial attention is devoted to the Romantic and Naturalistic schools. Grammatical structure and idioms, together with occasional exercises in composition are given. In the last term the instructor lectures in German upon German literature in the nineteenth century, and reports upon assigned readings are rendered in class. Students in the course are expected to read from 150-300 lines at a recitation.

Throughout the year, three hours.

Given in 1905-6.

Graphics.

The work in this department is eminently practical. The actual needs of engineers are kept in mind, and the

work is adapted thereto. With the exception of IA. the courses are open only to students in the Civil Engineering Course.

COURSE I.—Free Hand Drawing. Elementary Drawing, including a thorough training of the hand and eye in outline drawing, shading, and lettering.

First term, four hours.

COURSE IA.—Scientific Drawing. Open only to the members of the Scientific Courses. Has special reference to the accurate representation of scientific forms.

Throughout the year, one hour.

COURSE II.—The use and care of instruments, projection drawing, isometrical and cabinet drawing, and the principles of shading and tinting.

Second term, four hours.

COURSE III.—Descriptive Geometry, as applied to the representation by projection of all Geometrical Magnitudes, the intersections and tangencies of developable, double curved, and warped surfaces. Spherical projections, shades and shadows, and linear perspective.

Throughout the year, four hours.

COURSE IV.—Topographical and Machine Drawing, including tracing and blue-printing.

First term, three hours.

COURSE V.—Architectural Drawing. Working drawings of a frame building.

Second term, two hours.

Greek Language and Literature.

The aim of the department is to lead the student to the acquisition of a living knowledge of the Greek language as an introduction to a practical acquaintance with Greek life and thought. It is believed that by careful and accurate work in the first years of the language the student can gain such knowledge as will enable him to read widely and independently. The

courses laid down are such as are thought to be best adapted to that end. The work is varied, and an attempt is made to give a view of all departments of the literature. The department possesses a small collection of casts of antique sculpture, painted vases and other antiquities, and about a thousand photographs.

A voluntary class is formed each year for the purpose of special drill in sight reading.

COURSE I.—Homer, The Iliad or the Odyssey. Detailed study of two or three books and rapid reading of as much more as the time allows. This rapid reading of the Homeric poems as literature is made the basis of the study of early Greek life and civilization.

Xenophon, Memorabilia. The more interesting and important passages are carefully read in class. A weekly exercise in composition is based on the Greek text read. The aim is to develop a vocabulary and an accurate knowledge of Greek Syntax.

Throughout the year, four hours.

COURSE II.—Plato, Apology and Crito and selections from Phaedo. Outline of Greek Philosophy.

Lysias and Demosthenes.—Selected orations from both these writers are read in connection with a detailed study of the historical periods.

Greek Literature, text book and lectures. Assigned readings on special topics in Greek history and literature. Reading at sight.

This course is made the basis of the study of historical Greek life and civilization.

Throughout the year, three hours.

COURSE III.—A. Greek Drama. Detailed study of two plays and rapid reading of several others. Usually the following will be read: Aeschylus' Agamemnon. Sophocles' Oedipus Tyrannus, Euripides' Medea, and Aristophanes' The Frogs. Individual investigation of special topics. The course is made not only a study of the rise and development of the Greek Drama, but also a study in literary evolution.

Throughout the year, three hours.

B. Greek Oratory.—Andocides, Isocrates, Demosthenes. The history and politics and the public and private antiquities of the times. Lectures and assigned readings in Greek, English, and German.

Throughout the year, three hours.

One of these courses is given each year. In 1904-5 A. was given. Open to all who have completed Course II.

COURSE IV.—Classical Archaeology. Lectures on Architecture, Vase Painting, and Sculpture, illustrated with casts, photographs, and drawings. Open to those who have completed Course I., and under some limitations may be elected by students having no knowledge of Greek.

Throughout the year, two hours.

Given in 1905-6.

COURSE V.—Greek Testament. A minute and critical study of a portion of the New Testament to insure a familiar and accurate knowledge of vocabulary, syntax, and idioms, followed by more rapid reading to develop ease and rapidity in grasping the thought of the original. The purpose of the course is to lay the foundation for exegetical work. Open to all who have completed Course II.

Throughout the year, two hours.

Given in 1906-7.

COURSE VI.—Greek Literature. A careful survey of the field from Homer to the Roman Period. One hour a week is devoted to lectures and text-book work, one hour is given to critical readings in English translations and two hours to readings in Greek. Open to all who have completed Course II.

Throughout the year, four hours.

Given in 1905-6.

COURSE VII.—Greek Literature in English. The course consists of the lectures, text-book work, and English readings of Course VI. It may be elected by students having no knowledge of Greek.

Throughout the year, two hours.

Given in 1905-6.

Hebrew.

COURSE I.—Davidson's Hebrew Grammar, completed. Twelve or more chapters in Genesis read.

Throughout the year, four hours.

This course is given in alternate years.
Given in 1905-6.

History.

The aim of the department is to give that knowledge of the facts and the philosophy of history which belongs to a liberal education. The subjects in periods and countries are planned also to train for university work or to equip for preparation to enter law or journalism. The evolution of European civilization from its sources and the growth and the influence of Anglo-Saxon institutions are the general theme of the work. History is presented as a real educative process. The department has the appropriate library authorities for the several courses, and source materials are freely used. Abstracts, maps, essays, and outlines are required in the class work. The method of instruction is a combination of lectures and text-book. Course I. is required for admission to the succeeding courses.

COURSE I.—European History. The period covered extends from the Teutonic migration to the French Revolution. The first term is occupied with mediaeval institutions and the transition to Modern Europe. Robinson's European Readings and Bemont and Monod's Mediaeval Europe are the texts for class guidance. Required readings in standard authorities are assigned. The second half-year is devoted to the growth of nationalities and the religious and political struggles for balance of power. Lodge's Modern Europe furnishes the outline of the work.

Throughout the year, three hours.

COURSE II.—The Renaissance and the Reformation. The first term is devoted mainly to the Renaissance in Italy and sub-

ordinately in England. The political, intellectual, literary, and aesthetic phases of the movement are studied. Burckhardt and Symonds are the authorities used, with Einstein for the English Renaissance. The second term is occupied with the Reformation from Wycliffe to the Peace of Westphalia. The texts are Hausser and Fisher. This course alternates with Course III.

Throughout the year, three hours.

Given in 1905-6.

COURSE III.—French Revolution and Nineteenth Century. The first term follows the causes and the course of the French Revolution and concludes with the Napoleonic Era. A lecture course with references to many authorities, Stephen's Revolutionary Europe and Rose's Napoleon being required.

The second term examines Europe in the Nineteenth Century after the Congress of Vienna, studying the formation of the German and the Italian unity and the continental triumph of liberalism. Seignobos' Europe and Fyffe's Modern Europe are used as outlines of the work.

Throughout the year, three hours.

Given in 1904-5.

COURSE IV.—History of England. The work extends from the Teutonic origins to the Nineteenth Century. Lectures, collateral readings and text-books. Gardiner's Student's History and Green's Short History of the English People furnish the outline and references are required in the constitutional histories of Stubbs, Hallam, and Taswell and Langmead, and in the works of Froude, Gardiner, and Lecky. This course alternates with Course V.

Throughout the year, two hours.

Given in 1904-5.

COURSE V.—The Political and Constitutional History of the United States, from 1781 to 1861. The sources are extensively used as found in the government publications, the writings and addresses of statesmen, and the contemporary interpretation of national affairs. Lectures and reports by students on assigned readings in Schouler, Henry Adams, McMaster, Gordy, Rhodes, and the American Statesmen Series. Monographs required of the class each term.

Throughout the year, two hours.

Given in 1905-6.

Latin Language and Literature.

The courses in the Latin department are intended to direct the student to a systematic study of the language and its development, to acquaint him through a varied reading of the best authors with the leading features of the literature, and to make him familiar with the main facts of Roman life and civilization. Technical Grammar and Composition are studied only in so far as they contribute to the comprehension of the language. The department is well equipped with books, maps, and facsimiles of inscriptions and has a small collection of photographs.

The instruction is given by means of recitations supplemented by lectures, and, in the elective courses, by individual work.

COURSE I.—Cicero, De Senectute with selections from De Amicitia for rapid and sight reading.

Livy, Book I., or selections from Books XXI-XXII.

Cicero, Selected Letters. Weekly exercises in prose composition.

This course includes a detailed review of Latin case structure and syntax, and a specific effort is made to teach right habits of reading and translation. In connection with Livy is made a careful study of the geography of Spain and Italy and of the history of Rome during the Second Punic War. Attention is also directed to the literary characteristics of Livy and of his age.

Throughout the year, four hours.

COURSE II.—Horace, selected Odes, Epodes, and Satires.

The more common metrical structures are studied so that the Latin can be read with ease. Especial attention is directed to Horace's literary and political life and to as much of the history of the period as sheds light on the subject matter.

Catullus, selected Odes; general discussion of Latin Lyric Poetry.

Plautus and Terence, one play each. In connection with the translation of Plautus and Terence, the course includes lectures on the origin and development of comedy in Rome and

on the Roman Theatre. The plays are also made a basis for the investigation of syntactical problems.

Throughout the year, three hours.

COURSE III.—Tacitus, Annals Books I-II. The character of Tiberius and the upbuilding of the principate are studied by collateral readings from Suetonius and Velleius Paterculus.

Pliny, Letters. The text is used as a basis for studies in Roman private life.

Quintilian, Institutions X. The origin of Roman literary forms.

This course alternates with Course IV. Open to all who have completed Course II.

Throughout the year, three hours.

Given in 1906-7.

COURSE IV.—History of Latin Literature. Lectures are given, alternating with illustrative readings in both Latin and English, from various authors studied. A text-book is used, with assigned work in the various manuals in the library.

This course alternates with Course III. Open to all who have completed Course II.

Throughout the year, four hours.

Given in 1905-6.

COURSE V.—Latin Literature in English. This course consists of the lectures, text-book work, and English readings of Course IV. It may be elected by students without knowledge of Latin.

Throughout the year, two hours.

Given in 1905-6.

COURSE VI.—Roman Philosophy. Cicero, Tusculan Disputations, Book I.; Lucretius, De Rerum Natura, Books I., III., V.

The purpose of this course is to give a general knowledge of the whole field of ancient philosophy, with a careful study of the Stoic and Epicurean systems. Lectures are given, supplementing Mayor's Ancient Philosophy and Zeller's Stoics, Epicureans, and Sceptics.

This course alternates with Course VII. Open to all who have completed Course II.

Throughout the year, two hours.

Given in 1906-7.

COURSE VII.—Introduction to Latin Epigraphy; Roman Topography.

In Epigraphy, lectures and exercises are given, based on Egbert's Latin Inscriptions. During the latter part of the year, a study of the topography, architecture, and monuments of Rome is made.

This course alternates with Course VI. Open to all who have completed Course II.

Throughout the year, two hours.

Given in 1905-6.

Mathematics.

Extended courses are offered in pure and applied Mathematics; the work done being such as will be of greatest value in mental discipline, and in the application of the subject to Science and Engineering.

COURSE I.—Algebra. Quadratic Equations, Ratio and Proportion, Variation, Series. The Binomial Formula, Permutations and Combinations, Theory of Equations, Determinants.

Geometry.—Conic Sections.

First term, four hours.

Trigonometry.—Plane and Spherical, with applications to Surveying, Geodesy, and Astronomy.

Second term, four hours.

COURSE II.—Analytic Geometry. Construction and Discussion of Equations, the Straight Line, Circle, Ellipse, Hyperbola, and Parabola. The General Equation of Conics, Construction of Conics from their equations, Conics referred to Oblique Axes, Higher Plane Curves.

First term, three hours.

Differential Calculus. Introductory Theorems, Differentiation of Explicit Functions, Transcendental Functions, Successive Differentiation, Development of Continuous Functions. Evaluation of Illusory Forms, Maxima and Minima, Functions of two or more variables.

Integral Calculus.—Type Forms, General Methods of Transformation, Successive Integrations, the Constant of Integration, Geometrical Applications.

Second term, three hours.

COURSE III.—An advanced course in higher mathematics, taking up such subjects as are agreed upon by the class and the instructor.

Throughout the year, two hours.

Philosophy.

The aim of this department is to acquaint the student with the chief philosophic theories of the past and present, to cultivate in him the habit of critical and independent thought, and to set forth a consistent and satisfactory method of dealing with the fundamental problems of speculation.

COURSE I.—Psychology. A general introduction to the subject. A text-book is used, which is supplemented by informal lectures, assigned readings, and papers on special topics.

First term, three hours.

COURSE II.—Ethics. A brief survey of the history of ethical thought is followed by an examination of the chief ethical systems of modern times, with a view of arriving at the really valid principles which underlie human conduct. These principles are then applied to the various institutions and natural relations of human life. A text-book is used, supplemented by informal lectures.

Second term, three hours.

COURSE III.—History of Philosophy. A study of the chief philosophers and philosophic systems of ancient and modern times. Weber's History of Philosophy is used as a text-book. Open to all who have taken or are taking Course I.

First term, two hours.

Given in 1906-7.

COURSE IV.—Philosophy of Religion. The true basis of knowledge is inquired into, the traditional arguments for the existence of God are critically examined and the attempt is made to show that the theistic conception of the world is a necessary postulate of reason and of human life as a whole. Open to all who have taken Courses I. and III.

Second term, two hours.

Given in 1906-7.

COURSE V.—Theory of Thought and Knowledge. This course is made up of an inquiry into the general nature and conditions of thought, a review and criticism of the traditional logic, a study of proof and the most important logical fallacies, and a critical examination of philosophic scepticism, of realism, and idealism, and of apriorism and empiricism. Open to all who have taken or are taking Course I.

First term, three hours.

Given in 1905-6.

COURSE VI.—Metaphysics. This applies the conclusions reached in the preceeding course to the questions relating to reality. Our chief metaphysical ideas are examined and an attempt is made to fix their meaning. These results are then applied to the construction of a consistent and valid theory of the nature of the material world and of the human soul. Open to all who have taken Courses I. and V.

Second term, three hours.

Given in 1905-6.

Physics.

The leading idea in the instruction given in this subject is to prepare the student for independent research, upon the theory that such method affords the highest mental discipline and the most satisfactory practical knowledge. Each student, furnished with sufficient material and apparatus to enable him to do so, will pursue his own investigations under such guidance as will secure precision in method and accuracy in results. Illustrated lectures will frequently be given to make the path clear and the labor interesting and successful.

The College has complete facilities for obtaining a thorough elementary knowledge of this subject. The costly and splendid apparatus, kept up to the times by occasional additions, makes this subject unusually attractive and satisfactory.

COURSE I.—Class work, illustrated lectures, experiments.

Mechanics, Electricity, Hydraulics, Heat, Light, and Sound. Open only to those who have completed Mathematics I.

Throughout the year, three hours.

COURSE II.—Advanced work in experimentation. All branches of the subject are closely studied by original problems and investigation. Open only to those who have completed Mathematics II.

Throughout the year, three hours.

Political Science.

This department is open to those who have completed one year's work in History. Political theories and principles, ancient, mediaeval, and modern, are examined, as illustrated in the rise and fall of nations, and in the evolution of constitutions. In addition to the cultural worth of these investigations, it is the purpose to train for intelligent, responsible citizenship in the nation and community.

COURSE I.—Comparative Politics. This course is historical as well as comparative in method. It begins with a study of the state, its origin, development, forms, and ends, and an examination into the governments of ancient Greece and Rome and of mediaeval times. Then follows a study of the development and a comparison of the present constitutions of England, France, and Germany. The work is based on Wilson's The State, Burgess' Political Science, and Goodnow's Comparative Constitutional Law.

First term, two hours.

COURSE II.—American Administration. This is a comprehensive study of national, local, and municipal government in the United States. Constitutional Law is examined, the sources of the national constitution being traced and the development of its chief powers analyzed. The practical working of the administration in central and local control is then studied and particular attention given to the conditions and the rule of cities. The work is based in Cooley's Constitutional Law, Bryce's American Commonwealth, and Wilcox's American City.

Second term, two hours.

Physical Training.

For Young Men.—The object of this department is to give the student growth and increase of strength; to provide health and symmetrical development. These objects are acomplished by regular class exercises in the gymnasium during the fall and winter, on the field in the spring, and by periods of optional work after class hours. Physical measurements and strength tests of all students are taken upon entrance and at the close of the college course, and also at such other times as seem necessary. These form the basis of comparison of the students' condition and needs, and determine the character and amount of exercise necessary to overcome marked deficiencies, irregular development, or such deformities as are amenable to physical exercise.

Students will receive personal advice in reference to habits of life, exercise, study, and recreation, as well as suggestions pertaining to personal hygiene.

Regular exercise, consisting of Swedish work, military gymnastics, Indian club, wand, and dumb bell drills, principles of heavy gymnastics, is required of the men of the Sophomore and Freshman classes, three hours a week, from the middle of October to the middle of May. Elective work is offered the Junior and Senior classes.

For Young Women.—The aim of the work is to acquire a symmetrical development of the body as a basis for health and grace. The training is based upon Delsarte Philosophy of Expression, and the Swedish and German systems of free movements and light gymnastics. All young women are required to take the prescribed work unless excused on recommendation of the instructor.

The general work includes Indian club and dumb-bell exercises, flexing exercises to overcome stiffness, exercises to develop control of the muscles, and all devices in training that secure freedom of bodily action.

In addition to the Gymnasium, young women have the exclusive use of a bowling alley recently constructed in the basement of Hulings Hall.

REQUIRED WORK

In the Courses of Study.

For graduation in any course all work specified as required must be completed, and in addition subjects selected from the general list of electives sufficient to make a total of not less than one hundred twenty term hours. "Term hour" signifies one hour recitation weekly for one term of eighteen weeks. The prescribed work in physical training must also be completed, and in the senior year of the Classical, Latin and Modern Language, and Latin-Scientific Courses a thesis is required the first term and an oration the second term. In the Scientific and the Civil Engineering Courses a thesis is required the first term and a thesis or an oration the second term.

Sixteen recitations weekly is the regular number, but the Registrar may assign seventeen. No student may take more than seventeen or less than twelve hours work without the approval of the Registration Committee. In no case will additional hours be allowed except on the basis of previous high grade work.

In the following tables Arabic numerals denote the number of hour recitations per week—i. e., the number of term hours. Roman numerals refer to the courses of instruction detailed on pages 35 to 61, where may be found full description of the character of the work.

Classical Course.

FRESHMAN YEAR.	FIRST TERM.	SECOND TERM.
Latin I	4	4
Greek I	4	4
Mathematics I	4	4
English I	4	4
SOPHOMORE YEAR.		
Latin II	3	3
Greek II	3	3
English II., III	3	3
German I	4	4
History I	3	3
JUNIOR YEAR.		
Philosophy I., II	3	3
Elective [See Note]	11	11
SENIOR YEAR.		
Elective	14	14

NOTE.—In the Classical Course, one year's work in Science is required. Choice may be made from Biology I., II., Chemistry I., II., Physics I.

Latin and Modern Language Course.

FRESHMAN YEAR.	FIRST TERM.	SECOND TERM.
Latin I	4	4
French I. [See Note I.]	4	4
Mathematics I	4	4
English I	4	4
SOPHOMORE YEAR.		
Latin II	3	3
French II. [See Note I.]	4	4
English II., III	3	3
History I	3	3
Elective [See Note II.]	3	3
JUNIOR YEAR.		
Philosophy I., II	3	3
Elective	11	11
SENIOR YEAR.		
Elective	14	14

NOTE I.—Students that offer French instead of German for admission will take German I. and II. instead of French I. and II., as scheduled.

NOTE II.—In the Latin and Modern Language Course, one year's work in Science is required. Choice may be made from Biology I., II., Chemistry I., II., Physics I.

Latin-Scientific Course.

FRESHMAN YEAR.	FIRST TERM.	SECOND TERM.
Latin I	4	4
Biology I., II	3	3
Mathematics I	4	4
English I	4	4
Graphics Ia	1	1
SOPHOMORE YEAR.		
Chemistry I	3	.
English II., III	3	3
Physics I	3	3
French I. [See Note I.]	4	4
History I	3	3
Elective	.	3
JUNIOR YEAR.		
Philosophy I., II	3	3
Elective [See Note II.]	11	11
SENIOR YEAR.		
Elective [See Note II.]	14	14

Note I.—Students that offer French instead of German for admission will take German I. instead of French I., as scheduled.

Note II.—In the Latin-Scientific Course four years' work in Science is required. Choice may be made from Biology III., (or IV.) Physics II., Chemistry III., Astronomy I., II., Geology I., II.

Scientific Course.

FRESHMAN YEAR.	FIRST TERM.	SECOND TERM.
Biology I., II	3	3
Mathematics I	4	4
Graphics Ia	1	1
English I	4	4
French I. [See Note I.]	4	4
SOPHOMORE YEAR.		
Chemistry I., II	3	3
English II	3	.
French II. [See Note I.]	4	4
Mathematics II	3	3
Physics I	3	3
Elective	.	3
JUNIOR YEAR.		
Geology I., II	3	3
Astronomy I	.	3
Elective [See Note II.]	11	8
SENIOR YEAR.		
Philosophy I., II	3	3
Elective [See Note II.]	11	11

Note I.—Students that offer French for admission, but not German, will take German I. and II. instead of French I. and II. as scheduled. If both French and German are offered for admission, an advanced course in one of these languages will be taken in the Freshman year and another course in the Sophomore year.

Note II.—Two of the following courses must be taken: Biology III. (or IV.), Chemistry III., Physics II.

Civil Engineering Course.

FRESHMAN YEAR.	FIRST TERM.	SECOND TERM.
Mathematics I	4	4
Graphics I., II	4	4
English I	4	4
French I [See Note]	4	4

SOPHOMORE YEAR.		
Mathematics II	3	3
Graphics III	4	4
Engineering I., II	3	3
Chemistry I., II	3	3
English II	3	.
Elective	.	3

JUNIOR YEAR.		
Graphics IV., V	3	3
Engineering III	2	2
Chemistry III	3	3
Physics I	3	3
Geology I	3	.
Astronomy I	.	3

SENIOR YEAR.		
Engineering IV	4	4
Physics II	3	3
Elective	7	7

NOTE.—Students that offer French for admission, but not German, will take German I. instead of French I. as scheduled. If both French and German are offered for admission, an advanced course in one of these languages will be taken in the Freshman year.

List of Electives.

The following list of elective studies includes all subjects that are elective in any of the courses of study. Some of the subjects are required in one or more of the courses of study, but are elective in others. The list is open to all students under the conditions named below.

1. The student must be fully prepared for the work.

2. He must avoid all conflicts in hours.

3. So far as possible all required work below his rank must be completed before advanced electives are chosen. This rule may be waived in cases where it is necessary in order that the student may be ready for a particular line of work in the latter part of his course.

4. A study once elected must be pursued to the end of the year or to the completion of the subject. No credit for graduation will be given for partial courses unless by arrangement made with the instructor and the Registrar before the study is begun.

5. The student's choice of elective work must exhibit a definite and coherent plan.

6. The faculty reserves the right to disapprove choice of electives.

The Arabic numerals refer to the number of hour recitations per week; the Roman numerals refer to the detailed description of the courses of instruction found on pages 35 to 61.

SUBJECTS.	FIRST TERM.	SECOND TERM.
Astronomy I	.	3
Astronomy II	3	.
Biology I., II	3	3
Biology III	3	3
Biology IV	3	3
Biology V., VI	4	4
Chemistry I., II	3	3
Chemistry III	3	3
Chemistry IV	3	3
Chemistry V	3	3
Chemistry VI	3	3
Economics I., II	3	3
Economics III., IV	2	2
Elocution II	2	2
Elocution III	2	2
Elocution IV	1	1
English III	.	3
English IV	3	3
English V	3	3
English VI., VII	2	2
English VIII., IX	2	2
Engineering I	3	.
English Bible II	2	2
English Bible III	3	3
French I	4	4
French II	4	4
French III	4	4
Geology I, II	3	3

SUBJECTS.	FIRST TERM.	SECOND TERM.
German II	4	4
German III	3	3
German IV	3	3
Greek III	3	3
Greek IV	2	2
Greek V	2	2
Greek VI	4	4
Greek VII	2	2
Hebrew	4	4
History I	3	3
History II	3	3
History III	3	3
History IV	2	2
History V	2	2
Latin II	3	3
Latin III	3	3
Latin IV	4	4
Latin V	2	2
Latin VI	2	2
Latin VII	2	2
Mathematics II	3	3
Mathematics III	2	2
Philosophy I., II	3	3
Philosophy III., IV	2	2
Philosophy V., VI	3	3
Physics I	3	3
Physics II	3	3
Political Science I., II	2	2

GENERAL INFORMATION.

College Fees.

All students pay a fee of $30 a term. This includes incidental, library, and gymnasium fees.

Students in the Civil Engineering Course and those who elect any of the technical subjects of that course pay an additional fee of $7.50 a term.

In the Laboratories the following fees are charged each term:

Biology I., II	$ 2.00
Biology III., IV	4.00
Biology V., VI	5.00
Chemistry I	4.00
Chemistry II	4.00
Chemistry III., IV	7.50
Chemistry V	2.50
Chemistry VI	10.00
Geology II	2.00
Graphics Ia	2.00

In addition breakage of material furnished is charged at actual cost.

In Courses III. and IV. of Elocution an additional fee of $5.00 a term hour is charged.

All college fees are due on the day of registration.

Living Expenses of Young Men.

The young men of the College board in clubs or in private families, the latter costing about one-third more than the former. The cost of good table board is in this way reduced to from $2.25 to $3.00 a week. If the student have a room-mate, the necessary expenses for a year will fall within the following estimates:

	LOW.	LIBERAL.
Term fee	$ 60.00	$ 60.00
Room rent, fuel, light	27.00	45.00
Table board	80.00	108.00
Books	10.00	20.00
Total	$177.00	$233.00

To be added to these figures are laboratory fees, if the student pursue studies in which such charges are made. Students in the Civil Engineering Course pay an additional fee of $15 a year. The cost of books will vary greatly from term to term, but a fair average will fall within the limits given.

Expenses other than those enumerated depend largely on the student's tastes and habits, and the College does not undertake to estimate them. For the items mentioned the figures given are exact. Few students will have occasion for spending more than $250 a year. This, of course, does not include traveling expenses, clothing, or luxuries. An economical student can live on $200 a year; indeed not a few students spend less than this and yet live comfortably.

Young Women.

Allegheny College is a co-educational institution. It endeavors to give young women the highest educational advantages open to young men. Instruction is given in the same subjects and by the same professors, and young women have access to all departments of the college, and are eligible to all honors.

Hulings Hall. Young women not living at home or with relatives are required to live in Hulings Hall. The constant aim is to furnish here an ideal college home for young women, where they shall be surrounded with influences which promote true and cultured

womanhood. The Hall is under the charge of an accomplished preceptress whose influence with that of her competent assistants is constantly felt in the social, moral, and religious development of the young women under her care.

For the proper maintenance of the Hall as a college home for young women certain specific rules are essential, but it is the policy of the college to make only such regulations as will best protect the interests of those who reside there. As large a measure of self government as possible is accorded and the young women of the upper classes assume a certain amount of responsibility for the management of the Hall. All proper freedom is accorded, but applicants for admission are reminded that the purpose of residence in Hulings Hall is not primarily social but educational, and the authorities in charge reserve the right to determine what best promotes the educational welfare of the residents in the Hall. A copy of the regulations for the government of the Hall will be sent on request.

The rooms are furnished with beds, mattresses, pillows, chairs, and tables. Each resident supplies the following articles: Sheets, pillow cases, and bed covering, towels, napkins, and individual table silver. The rates for a term, including heat and light, are as follows:

Main corridor, second and third floors	$50.00
Rear corridor, second and third floors	40.00

When two persons occupy a room the rate for each is one-half the above amount. Room rent is payable at the opening of each term. Rooms may be reserved in advance by the payment of a deposit of half the rate for the term. Seniors are allowed first choice of rooms. Table board is $55 a term. The total expense

for board, room, heat, and light for the year, where two occupy a room, is $160 for those in the front corridor and $150 for those in the rear corridor.

Aid to Students.

Self-Help.—Young men help themselves in several ways. A considerable number of the present students are earning their expenses in whole or in part. Some are employed in light work connected with the College or the boarding clubs. Some find in town opportunities for work of various kinds. A few are serving churches in the neighborhood of Meadville. It is the policy of the College to help students that help themselves.

The Lindley Endowment.—By the will of the late Miss Lucy Lindley, of Meadville, the College received the sum of ten thousand dollars, the interest of which is used to assist students dependent upon their own efforts to obtain an education. Application for aid from this fund should be made to the President. It should be remembered, however, that only a limited number of students can be aided in this way.

The Ballantyne Scholarship Fund.—Thirty thousand dollars has recently been given to the College by Mrs. Hettie F. Ballantyne, of Pittsburg, in memory of her late husband, to be known as the JAMES ALEXANDER BALLANTYNE SCHOLARSHIP FUND. The income of this fund is to be used to pay the college term fees, and in cases of need, certain other expenses, of the sons and daughters of ministers of the Pittsburg Conference, and of young men from the territory of that conference who are studying for the ministry. This fund is administered by the officers of the College Faculty

on recommendation of a committee of the Conference. Application should be made to Rev. C. W. Smith, D. D., Pittsburg, Pa.

High School Scholarships.—At the last annual meeting of the board of trustees thirty prize scholarships of fifty dollars each were created, to be awarded each year to honor students in the thirty best high schools in the patronizing territory of the college. In case the graduating class numbers ten or less, the scholarship must go to the one having maintained the highest scholastic rank during his high school course. If the class numbers more than ten, and less than twenty-five, it may go to the first or second in rank, and if there are over twenty-five in the class the scholarship may go to any one of the three highest. The amount of the scholarship is to be applied on the fees of the freshman year.

Educational Society Loans.—Students who are members of the Methodist Church, showing promise of usefulness in any form of Christian activity, may secure loans from the Educational Society. These loans are without interest and need not be paid until two years after graduation. These loans are offered not only to candidates for the ministry, but also to all needy and worthy students who show promise of useful service in lines of Christian activity and are endorsed by their home Quarterly Conference. The loans are made by the Society on the recommendation of the Faculty.

No aid from the above mentioned funds, or from any other source, is given to students who use tobacco.

A student having received aid from any of the College funds will be given a letter of dismissal to

enter another college only after all such aid shall have been returned.

Religious Culture.

The College was founded by Christian men for the promotion of Christian culture. It believes that education should always include, as its highest aim, the development of Christian character. It seeks to surround the student with such influences and helps as foster the religious life. Chapel services are held each morning and all students are required to be present. Regular attendance on Sunday mornings at some church, selected by the student or his parents, is also required. Prayer meetings are held Wednesday evening of each week. The results are manifest in the quickening and strengthening of many in the religious life. Religious services, under the care of the Young Men's Christian Association of the College, are held on Monday evening of each week in their hall. On Sunday evening the Young Women's Christian Association holds its regular meeting in the parlor of Hulings Hall. The students' Christian Associations also conduct religious services weekly in several places in the city and surrounding region. In this way the students are brought into religious association and become familiar with various forms of religious activity.

The religious influence of the College is not in any sense sectarian, but Christian. On the rolls this year are representatives from sixteen Christian denominations.

The aim is to make the moral and religious life of the College such that the student will be under as helpful influences here in Meadville as he would be in his own Christian home.

The Adviser System.

Each student on registering is assigned to some member of the Faculty, who serves throughout the year as a special counsellor on all matters in which the student finds the need of frank and friendly advice. The relation between adviser and student is intended to be perfectly fraternal, without restraint on either side.

Literary Societies.

There are three literary societies: The Allegheny and the Philo-Franklin for young men, and the Ossoli for young women. The societies have their respective halls, with libraries aggregating about 3,000 volumes. These literary societies render the College efficient service in the literary, forensic, and parliamentary training of students, and the society friendships are invaluable to the members. While membership in a literary society is not required, only members are eligible to senior honors, and every student is earnestly advised to avail himself of the obvious advantages of a society. The societies have prize contests every year in oration and essay. At commencement time there is held an inter-society contest.

Clubs.

The Classical Club, composed of the instructors in the classical departments and about twenty-five advanced students, meets for the review of new books and current literature, and for the reading and free discussion of papers submitted by members on lines of classical investigation. The room of the club is on the second floor of the library.

The Quill Club represents the journalistic and liter-

ary interests of the College. Its aim is to encourage press correspondents; to co-operate intelligently with the editors of the college publications and foster original and creative literary effort. It meets monthly. The membership is limited to thirty.

The Scientific Club meets weekly to discuss abstracts of current scientific papers or to listen to the presentation of original research of some of the members. The club includes members of the faculty and students in the college who are interested in scientific work.

Prizes.

In addition to essays and oration prizes offered by the literary societies, two prizes are open to competition by students of the College classes.

The Wakefield Oration Prize.—Mr. James A. Wakefield, of Pittsburg, furnishes a prize of fifty dollars, in the name of his grandfather, Rev. Samuel Wakefield, D. D., awarded in April of each year, to the young man delivering the best oration. The winner of this prize represents the College in the Tri-State Oratorical League Contest held in May.

Class of Ninety Oration Prize.—The class of '90, which numbered forty-two persons, has established a prize of forty-two dollars to be awarded annually to the young man or woman delivering the best oration at a contest held in the spring term.

Athletics

Outdoor exercise and athletic sports under the direction of competent supervisors are fostered as helpful in complete physical training, but are made consistently secondary to scholastic work. No student may

take part in athletic events without the consent of the physical director after a physical examination. The athletic interests of the college are in the hands of the Athletic Association, to which all members of the College are eligible, and the business is managed and all funds administered by an Athletic Advisory Board, composed of four members of the faculty and four students. All details of athletic contests must receive the sanction of the Athletic Board, and every precaution is taken to insure clean athletics. Players must be *bona fide* students taking not less than twelve hours work, must have been, except for Fall term sports, in college a full term, may not have more than one condition in any preceding work or be delinquent in the current term's work, and may not receive remuneration, directly or indirectly, for their services. Competent coaches are provided in foot ball and base ball.

Degrees.

The degree of Bachelor of Arts is conferred upon those who complete in a satisfactory manner the Classical, the Latin-Scientific, or the Latin and Modern Language Course.

The degree of Bachelor of Science is conferred upon those who complete in a satisfactory manner the Scientific or the Civil Engineering Course.

Bachelors of Arts of this College, or of another of equal rank, may pursue in residence work in not more than two distinct lines of study. On the completion of a full year's work, including a satisfactory thesis, the degree of Master of Arts will be conferred. Bachelors of Arts of this College may, by vote of the Faculty, be permitted to pursue this work in non-residence, but in that case at least two years must be

devoted to it. A student who has completed at the end of the first term of the Senior year all requirements for the degree of Bachelor of Arts, may pursue work in residence which shall count toward the degree of Master of Arts. Such a student may complete in non-residence the remainder of his work for the Master's degree and receive the degree one year after receiving the Bachelor's degree.

The degree of Master of Science is conferred upon Bachelors of Science on the same condition as the degree of Master of Arts is conferred upon Bachelors of Arts.

Every person receiving a degree from the College will pay a fee of five dollars for diploma.

REGISTER OF STUDENTS.

Classification.

The classification of the Catalogue is made in February of the college year, and gives the class rank for the year.

In the Senior class are included those who have completed by February 1, not less than one hundred four term-hours, of the one hundred twenty necessary for graduation.

In the Junior class are included those who have completed by February 1, not less than seventy term-hours.

In the Sophomore class are included those who have completed by February 1, not less than thirty-six term-hours.

In the Freshman class are included all who have been admitted to the class during the year.

The small capitals following the names indicate the course of study: C standing for Classical, S for Latin-Scientific, L for Latin and Modern Language, ML for English and Modern Language, and E for Civil Engineering.

Graduate Students.

Candidates for the Degree of Master of Arts.

Dewey, Malcolm Howard.....Meadville
A. B., Allegheny College, 1904. Greek, Latin.

McClintock, Helen Elizabeth.....Meadville
A. B., Allegheny College, 1904. English, French.

Stockton, Herbert John.....Meadville
A. B., Allegheny College, 1904. Greek, Latin.

Tabor, Theron Franklin.....Rundell
A. B., Allegheny College, 1902. Economics, French.

Not Candidate for a Degree.

Rickey, Wesley Branch.....Lucasville, O.
A. B., Ohio Wesleyan University, 1904. Philosophy, Greek.

Graduate Students 5.

Seniors.

Appleby, Mabel Blanche, L.....Tarentum
Baker, Frank Elmer, S.....Clymer, N. Y.
Ballantyne, James Van Horne, L.....Derry Station
Cowles, Clifford, E.....Ashville, N. Y.
Davenport, Levi Orton, S.....Albion
Dewey, Katherine Deniston, L.....North East
Edmonds, Cecil Kay, C.....Meadville
Farr, Cinnett Grant, C.....Fayetteville, W. Va.
Frost, Frank Raymond, E.....Meadville
Harrison, Anna Jeanette, C.....Meadville
Hassler, James Herman, E.....Meadville
Hewit, Wilber Jay, C.....Meadville
Hyskell, Ira David, C.....Smicksburg
Johnston, Lettie Love, L.....Pittsburg
King, Claude Hurst, C.....Ripley, W. Va.
Larder, Frank H., E.....Sinclairville, N. Y.
Lewis, Walter Davis, C.....Smicksburg
McArthur, Fred Mellon, S.....Meadville
McIntier, Charles Andrew, E.....Corry
McLaughlin, Margaret, C.....Corry
Merrill, Charles Coburn, C.....Philadelphia
Mitchell, Paul, S.....Indiana
Morrison, Joseph Emil, C.....Blairsville
Ohlman, Frank Max, E.....Meadville
Reynolds, Fred Combs, C.....New Castle
Rowley, Edith, L.....Dunkirk, N. Y.
Rowley, George Henry, C.....Greenville
Scott, Clifford John, L.....Meadville
Scott, Herbert Moore, C.....Moundsville, W. Va.
Scouten, Roy William, C.....Tidioute
Stone, Harry E., C.....Corry
Van Riper, Benjamin Whitman, S.....Meadville
Van Slyke, Clarence Allan, L.....Centralia, N. Y.
Wood, Harley John, C.....Waterford
Wright, Bruce Simpson, L.....Jamestown, N. Y.
Wynn, Wesley Akers, E.....Derry Station

Seniors 36.

Juniors.

Ball, Elsie Frances, S.....Oil City
Bolard, David Albert, S.....Philadelphia
Canfield, Ethel J., L.....Cambridge Springs
Comfort, Albert Wilkins, C.....Pittsburg
Crawford, John Raymond, C.....Meadville
Darrow, Floyd Levern, S.....Lakewood, N. Y.
Dye, Claude Russell, C.....South Dayton, N. Y.
Gallup, Georgia Bernice, L.....Meadville
Gartner, LeRoy George, E.....Meadville
Giblyn, John Richmond, L.....Watertown, N. Y.
Giele, Nora Hildegarde, L.....Meadville
Gleason, Walter William, E.....Johnsonburg
Hotson, William B., E.....Meadville
Kelsay, Harriet, L.....Meadville
Lotz, Anna Laura, L.....Kinsman, O.
Ottaway, Adelaide C., L.....Sherman, N. Y.
Reavley, Albert Addison, C.....Buffalo, N. Y.
Robertson, Andrew Wells, L.....Panama, N. Y.
Rossiter, Ben, E.....Meadville
Shaffer, Frederic A., S.....Cochranton
Silver, Harriette Moore, L.....Wellsville, O.
Stuntz, Ross Maxwell, C.....Edinboro
Sturtevant, Watkin Powell, C.....Conneautville
Swanson, Louis William, C.....Tidioute
Thompson, Frank Meredith, C.....Canonsburg
Tribby, Fred N., E.....Meadville
Wilson, Robert Forrest, C.....Cleveland, O.
Wilson, Charles Alphonso, L.....Allegheny
Wilson, Nellie Gertrude, L.....Union City

Juniors 29.

Sophomores.

Abbott, Herbert Newell, E.....Erie
Adams, Katharine, L.....Meadville
Aiken, J. Claude, E.....Butler
Baker, Wynona Marie, C.....Greenville
Bates, Florence Lucile, L.....Randolph, N. Y.
Calvin, Joseph Mac, L.....Meadville
Carroll, Henrietta Josephine, L.....Meadville
Christie, Clare Leroy, L.....Columbus
Coggan, Clifford Jason, E.....Castile, N. Y.
Courtenay, Amy Valliant, L.....Zanesville, O.
Cozins, Mary Rachel, C.....Hadley
Crissman, Jessie Cessna, L.....Sewickley
Deane, Mabel Evelyn, L.....Bridgeport, Conn.
Doane, Morse Ellis, E.....Meadville
Drake, Daniel Bloomfield, E.....Meadville
Etter, Elizabeth Katharine, C.....East Greene
Evaul, J. Wilbur, E.....Palmyra, N. Y.
Feldmiller, Uda, C.....Cochranton
Fish, Fernando Temple, E.....Leavenworth, Ind.
Flaugh, Frank Calvin, E.....Meadville
Foster, Edna Lovisa, L.....Pleasantville
Fowler, Jennie Mildred, L.....Meadville
Fowler, Ethel Clorinda, L.....Meadville
Gartner, Dan Arthur, E.....Meadville
Gaston, Phylinda Elise, L.....Meadville
Gill, Charles Wesley, C.....Ronald
Glenn, George Alfred, E.....Tidioute
Griggs, Clarence Harry, E.....Falconer, N. Y.
Harper, Robert Carl, E.....Meadville
Hartung, Charles A., L.....Evans City
Hawk, James Finley, S.....Petrolia
Hewit, Forrest Arba, E.....Meadville
Hoch, Dolph Augustus, E.....Chicora
Horn, Kenneth, E.....Wilkinsburg
Hotson, Charles Marshall, E.....Meadville
Hull, Harold H., ML.....Greenville
Irwin, Ralph Edward, S.....Meadville
Jones, Olin Clarke, C.....Ashtabula, O.
Kelley, Elijah Wilson, C.....Versailles
Kightlinger, Ralph Blaine, E.....Meadville

King, John William, C.....Munhall
La Bounty, Francis Louis, C.....Ashtabula, O.
Lynch, Mary Elizabeth, C.....Corry
Lyon, Goffrey, S.....McLean
McAlister, Katherine May, C.....Irwin
McClintock, Walter John, L.....Meadville
McKinney, Joseph Morris, E.....Hebron, W. Va.
McKinney, Ralph Garfield, L.....Franklin
McLaughlin, Frank Harry, L.....Springboro
McQuiston, William Jenkins, L.....Atlantic
Mackey, William Thompson, C.....New Castle
Marhofer, Anna Eleanor, L.....Meadville
Martin, George Granville, E.....Warren, O.
Miller, Benjamin Franklin, E.....Mount Pleasant
Milliren, Effie Alberta, L.....Reynoldsville
Miner, Wallace Herman, C.....Meadville
Pettengill, Edna Holdsworth, L.....Corry
Phillips, Nathan Harley, S.....Girard
Phillips, Florence Hester, L.....Youngstown, O.
Seybolt, James Marsena, E.....Meadville
Smith, Minniedell Reilly, L.....Osceola, Wis.
Smith, Thomas Charles, E.....Franklin
Stockton, Frank Tenney, C.....Meadville
Taft, William Sanders, L.....Youngsville
Tillotson, Gustav Kletzsch, E.....Greenville
Vosler, Ray, E.....Greenville
Weber, Floyd Porter, E.....Meadville

Sophomores 67.

Freshmen.

Alderman, Warren Grove, E.....Latimer, O.
Anderson, Robert William, E.....Meadville
Andrews, Archibald Dickson, L.....Meadville
Andrews, Ethel Amelia, L.....Meadville
Andrews, Richard Parker, C.....Pittsburg
Ball, Wendell Phillipp, E.....Milesgrove
Barnes, Carlton Sears, L.....Columbus
Beatty, Mabel Alicia, L.....Oil City
Beebe, Josette Hilda, L.....Meadville
Berkey, Iva, C.....Ligonier
Blake, Joseph Marshall, E.....Meadville
Bond, Mary Louise, L.....Meadville
Bright, Stanley, C.....New Castle
Brown, Harry Morris, C.....Cochranton
Bushnell, Mary Eleanor, S.....Montpelier, Ind.
Callahan, Richard Beatty, C.....McKeesport
Cappeau, William Arthur, E.....Reibold
Challinor, David Charles, E.....Pittsburg
Clark, Gilbert Ralph, C.....Centerville
Clark, Arvin Chester, E.....Cleveland, O.
Colter, Thomas Archbold, S.....Meadville
Cook, Jacob Miner, E.....Hamilton
Cooley, Fred Boughton, L.....Kingsville
Cripps, William Earl, E.....East Liverpool, O.
Crowe, Edward Francis, L.....Meadville
Cutshall, Ira Frie, E.....Tarentum
Derfus, Ludwig Frank, S.....Salem, O.
Dermitt, Jennie Lyster, C.....Franklin
Dixon, Lewis Terhune, E.....East Randolph, N. Y.
Donaldson, Archibald Watson, E.....Du Bois
Dowler, Julia Gertrude, L.....Centerville
Eldred, Albert Irvine, S.....Spartansburg
Ferry, Charles W., L.....Warren
Finley, Phoebe Lockard, C.....McKeesport
Fisher, Jerome Collett, L.....Conneaut, O.
Fitzgerald, Nell Verena, L.....Marienville
Fowler, Herman Elton, E.....West Newton
Fullerton, Clifford Sherman, E.....Johnsonburg
Giesey, Earle McAdams, C.....Wheeling, W. Va.
Ginn, Robert, E.....Piqua, O.

Graves, Harl Hartley, E.....Girard
Greer, Charles Thomas, C.....New Castle
Hamm, Harry Hess, S.....Knox
Hart, May Esther, C.....Girard
Hausmann, Emma Ruth, L.....Erie
Heibel, Julia Mathilda, L.....Warren
Heiner, Helen Graham, L.....Butler
Henderson, Paul Addison, E.....Piqua, O.
Henry, Olga Riene, L.....Punxsutawney
Hilborn, Howard Davison, E.....Kane
Horner, Simpson Wesley, E.....Detroit, Mich.
Houser, Otto Henry, C.....Meadville
Howe, Josephine, L.....Meadville
Hughes, James Charles, C.....St. Paul, Minn.
Irvine, Francis, E.....Tidioute
Jelbart, Thomas Joseph, E.....New Bethlehem
Johnson, Hattie Olivia, E.....Jamestown, N. Y.
Johnston, Dottie French, L.....Pittsburg
Kennedy, Maxwell Earl, E.....Black Diamond, Ariz.
Kepler, William R., E.....Milesgrove
Kibler, Erma Martha, C.....Girard
King, Merle William, C.....Jamestown, N. Y.
Kingsley, Marcus Earnest, E.....Falconer, N. Y.
Knapp, Frank L., L.....Paulding, O.
Kraus, Harriet, ML.....Meadville
Lauderbaugh, Laura Helen, L.....Meadville
Lick, Maxwell John, S.....Meadville
Lippitt, Guy Harold, L.....Meadville
Lore, James Irvin Jamison, L.....Vandergrift
Lyon, Addison Richard, S.....Sharpsburg
Lyon, Fannie Winifred, L.....Meadville
Lytle, John Horace, ML.....Dayton, O.
Lusk, Amy Marie, L.....Butler
MacCleery, John, C.....Jefferson, O.
McDowell, Horace Hammon, ML.....Pittsburg
McGranahan, Elma, L.....Meadville
McLean, William Vincent, C.....Clark's Mills
Main, William Robert, S.....Titusville
Martin, Chauncey James, E.....New Castle
Miller, Maidie Ailene, L.....Warren
Miller, Arthur Devoe Powell, C.....Pittsburg

Miller, Frank Purl, L.....Conneaut Lake
Miller, Karl Andrew, E.....Meadville
Miner, George Lewis, C.....Meadville
Miner, John Lynn, S.....Punxsutawney
Mosier, Earl Gaston, E.....Wilkinsburg
Mossman, Robert Gillis, S.....Greenville
Mowry, Oliver W., E.....Derry Station
Murray, Norman Daniel, L.....Conneaut, O.
Murray, Clyde Caldwell, S.....Reynoldsville
Neale, Nulu Nihilson, L.....Reynoldsville
Nelson, Hugh Melvin, E.....Kane
Peabody, Alonzo Orran, E.....Meadville
Peiffer, Flossie, L.....Mill Village
Perry, Archie, E.....Oil City
Phillips, Harriet Belle, L.....Youngstown, O.
Pinckney, William Charles, E.....Kane
Porter, Philip Ensign, E.....Newton Falls, O.
Roberts, Elizabeth Mae, L.....Meadville
Robinson, Samuel Worthington, C.....Boston
Russell, Alger Fay, C.....Meadville
Russell, Raymond R., E.....Butler
Russell, Robert Wolcott, ML.....Wilkinsburg
Schalk, Marmaduke D., E.....Conneaut, O.
Scott, Zaccheus Roscoe, S.....West Newton
Seipp, Willa Frances, L.....Pittsburg
Shields, Cleon Euclid, E.....Dayton, O.
Siggins, Ralph, L.....Tidioute
Slater, Mary Ann, S.....Youngsville
Smith, Frank Glenroy, E.....Erie
Smith, Larue Free, E.....Guys Mills
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Thomas, William Evan, L.....Tidioute
Thompson, Edith Josephine, ML.....Tidioute
Tordella, Uda Katherine, L.....Meadville
Wright, Lucy Helen, ML.....Dunkirk, N. Y.

Freshmen 119.

Special.

Beyer, Mary E.....Punxsutawney
Church, Gaylord.....Meadville
Davis, Myron Park, Jr.....Meadville
Elstein, Josephine.....Erie
Evans, Alfred W.....Pittsburg
Fuellhart, Mae.....Tidioute
Fuller, Julia Gertrude.....Meadville
Grauel, Florence May.....Sharpsburg
Harper, Frances Louise.....Butler
Herwig, Philip C.....Kent, O.
West, Mabel Elizabeth.....Corry
Worcester, Charles Winchell.....Lebanon, N. H.

Special 12.

Summary.

	Men.	Women.	
Graduate Students	4	1	5
Seniors	30	6	36
Juniors	20	9	29
Sophomores	46	21	67
Freshmen	85	34	119
Special	5	7	12
Total	190	78	268

DEGREES CONFERRED JUNE 16, 1904.

Doctor of Laws.

Merriman Colbert Harris.

Doctor of Divinity.

Edward Davis McCreary
Joseph Walter Miles.

Master of Arts.

Jessie Merchant
Robbins Newton Taylor.

Bachelor of Arts.

Arthur Bates Benn
Malcolm Howard Dewey
Daisy Estelle Foster
Charles Roy Hayes
Mary Frick Jones
Homer Ernest Lewis
Helen Elizabeth McClintock
William Jewart Miller
James Gayle Nelson
Charles Lavens Smith
Albert Joseph Snearline
Herbert John Stockton
Louise Winifred Terry
Walter Scott Trosh
Sarah Louise Breene
Bessie May Dutton
Robert Guthrie Freeman
Roy Watson Hazen
Blaine S. Kincaid
Elvin Lowthian
Harry Beeson Mansell
Richard Nye Merrill
Albert Clarence Saxman
Harry Lester Smith
Fred Everett Stockton
James Glenn Street
Ruth Thomas
Warren Ferde Wilcox.

Bachelor of Letters.

Blanche Rose Garver
Mary Roberts
Aravilla Meek Taylor.

Bachelor of Science.

Fred Conover
Frank Bert McCartney
Frederick Wineman Strickler
Robert Victor Haas
Roy Foster Shepard
Harry Allen Turner.

PHI BETA KAPPA.

ETA CHAPTER OF PENNSYLVANIA.

Chartered September 12, 1901.

OFFICERS.

President.

President William H. Crawford.

Secretary.

Professor William A. Elliott.

MEMBERS INITIATED IN JUNE, 1904.

From the Senior Class.

Robert Guthrie Freeman
Homer Ernest Lewis
Charles Lavens Smith
Harry Lester Smith
Winifred Terry.

From the Alumni.

Rev. Merriman Colbert Harris, D. D., '73.
Mrs. Harriet Linn Beebe, A. M., '80.
Francis Gurney Stubbs, A. M., M. D., '90.

Annual Address June 15, 1904.

Hamilton Wright Mabie.

Subject, Idealism in American Life.

Addresses and Recitals for the Year 1904-5.

Nov. 7.—M. Alexandre Guilmant, Paris.
Organ Recital.

Nov. 28-30.—Rev. J. M. Buckley, D. D., LL.D., New York.
Three Lectures on Extemporaneous Address.

1.—General and Special Preparation.

2.—The Defects and Dangers of the Method.

3.—A Comparison Between Extemporaneous Address and Other Forms of Oratory.

Dec. 1, 2.—Rev. W. V. Kelley, D. D., LL. D., New York.
Two Lectures.

1.—Some Reasons for Reading Robert Browning.

2.—Mathew Arnold's Apostolate of Sweetness and Light.

Jan. 22.—Bishop J. F. Berry, Buffalo.
Aggressive Evangelism.

Jan. 26.—Rev. E. M. Randall, D.D., Chicago.
Sermon on the Day of Prayer for Colleges.

Feb. 7.—Bishop William F. McDowell, D.D., LL.D., Chicago.
The Ministry as a Profession for Young Men.

Feb. 21.—Dean Benjamin A. Millikin, M.D., Western Reserve Medical School, Cleveland.
Medicine as a Profession for Young Men.

April 13.—Judge John J. Henderson, LL.D., Superior Court of Pennsylvania, Meadville.
The Law as a Profession for Young Men.

April ...—Charles Emory Smith, Editor of the Philadelphia Press.
Journalism as a Profession for Young Men.

June 18.—Bishop Henry W. Spellmeyer, D.D., Cincinnati.
Sermon before the Christian Associations.

June 20.—Rev. William F. Anderson, D.D., New York.
Annual Address before the Phi Beta Kappa Society.

June 21.—William F. Carl, Guilmant Organ School, New York.
Organ Recital.

Allegheny College Preparatory School.

This school is under the direct control and supervision of the college authorities, but has its own building and a distinct corps of instructors.

It aims to prepare students for college with a minimum expenditure of time. It is realized that many students looking forward to a college course are precluded by age or by lack of early advantages from taking a regular four years' course in academy or in high school. Young men and women of maturity can by thorough application fit themselves for college in less time than is necessary for younger and less mature persons. Earnest and capable younger pupils may also in some cases gain time in fitting for college. The work is systematic and thorough and every effort is made to enable the student to work to the best advantage. Under certain limitations students may take a part of their work in college classes. Students registered in the college also who are deficient in certain subjects can pursue these studies under skilled instruction and with every facility for accurate and thorough work.

All instruction is given by college graduates, teachers of thorough preparation and successful experience.

Full particulars, including list of the instructors and students, are found in the catalogue of the school, a copy of which will be sent on request.

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THE COLLEGE BULLETIN

SERIES V, No. 1
FEBRUARY, 1906

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CATALOGUE

1905-1906

ALLEGHENY COLLEGE

FOUNDED IN 1815

NINETY-FIRST YEAR

CATALOGUE

OF

ALLEGHENY COLLEGE

FOR

1905-1906

WITH ANNOUNCEMENTS FOR
1906-1907

MEADVILLE, PA.
1906

THE
JOHN CRERAR
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THE ALLEGHENY COLLEGE BULLETIN

PUBLISHED QUARTERLY
BY THE COLLEGE

Entered as second-class matter in the postoffice at Meadville, Pa.

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CALENDAR.

1906.

April 11, Wednesday—Last day for presenting Senior Orations and Theses.

12, Thursday, 8:00 p. m.—Wakefield Oration Contest.

May 10, Thursday—Choice of Senior Speakers.

24, Thursday, 8:00 p. m.—Class of Ninety Oration Contest.

30, Wednesday—Memorial Day, a holiday.

June 8, 9, 11, 12—Senior Examinations.

12, 13, 14, 15, 16—Second Term Examinations.

17. Sunday, 10:45 a. m.—Baccalaureate Sermon by President William H. Crawford.

7:45 p. m.—Annual Sermon before the Christian Associations by Rev. S. J. Herben, Litt. D.

18, 19, Monday and Tuesday—Entrance Examinations.

18, Monday, 7:30 p. m.—Commencement Exercises of the Preparatory School.

19, Tuesday, 2:00 p. m.—Class Day Exercises.

3:00 p. m.—Annual Meeting of the Board of Control.

4.00 p. m.—Annual Meeting of the Phi Beta Kappa Society.

7:30 p. m.—Phi Beta Kappa Address, by Ida M. Tarbell, L. H. D.

9:00 p. m.—Reception by President and Mrs. Crawford.

20, Wednesday, 9:00 a. m.—Annual Meeting of the Board of Trustees.

1:00 p. m.—Meeting of the Alumni Association. Annual Dinner.

7:30 p. m.—Commencement Concert.

9:00 p. m.—Fraternity Banquets.

21, Thursday, 10:00 a. m.—Commencement Exercises.

SUMMER VACATION.

1906.

Sept. 18, Tuesday—First Term Begins.

17, 18, Monday and Tuesday—Entrance Examinations.

18, Tuesday—Registration of New Students.

19, Wednesday—Registration of Old Students.

20, Thursday, 8:00 a. m.—Recitations Begin.

Nov. 7, Wednesday—Last Day for Submitting Subjects of Senior Theses.

29, Thursday—Thanksgiving Day, a holiday.

Dec. 21, Friday, 12:30 p. m.—Recitations Close.

CHRISTMAS RECESS.

1907.

Jan. 9, Wednesday, 9:00 a. m.—Recitations resumed.

9, Wednesday—Last Day for Presenting Senior Theses.

17, Thursday—Day of Prayer for Colleges.

Jan. 25—Feb. 1.—First Term Examinations.

Feb. 1, Friday, 4:00 p. m.—First Term Ends.

5, Tuesday—Second Term Begins. Registration.

6, Wednesday, 8:00 a. m.—Recitations Begin.

22, Friday—Washington's Birthday, a holiday. The College Dinner.

March 6, Wednesday—Last Day for Submitting Subjects of Senior Orations and Theses.

29, Friday, 4:00 p. m.—Recitations Close.

EASTER RECESS.

April 9, Tuesday, 8:00 a. m. Recitations Resumed.

11, Thursday, 8:00 p. m.—Wakefield Oration Contest.

24, Wednesday—Last Day for Presenting Senior Orations and Theses.

May 10, Friday—Choice of Senior Speakers.

23, Thursday, 8:00 p. m.—Class of Ninety Oration Contest.

30, Thursday—Memorial Day, a holiday.

June 7, 8, 10, 11—Senior Examinations.

20, Thursday—Commencement.

Allegheny College was organized in 1815 and chartered in 1817. The corporate title is THE PRESIDENT AND TRUSTEES OF ALLEGHENY COLLEGE.

The governing powers are vested in the Board of Trustees and the Board of Control. The members of the former are elected for a life term from nominations made by the Board of Control. The latter body consists of two ministers and two laymen chosen yearly by each of four annual conferences of the Methodist Episcopal Church—viz: The Pittsburg, Erie, East Ohio, and West Virginia Conferences. It nominates for all vacancies in the Board of Trustees or in the Faculty.

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Durbin Horne,	Pittsburg

*Deceased.

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*Deceased.

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ROXANE LANGELLIER, A.M.,
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FLOYD L. DARROW,
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PROFESSOR MULFINGER

DESCRIPTION OF THE COLLEGE.

Historical Sketch.

Allegheny College was founded in 1815 by citizens of Meadville, then a frontier village of some four or five hundred inhabitants. The first president was Rev. Timothy Alden, a Presbyterian preacher and teacher. The institution was chartered in 1817 and in 1820 the corner stone of the first building, Bentley Hall, was laid. In 1831 a strong appeal was made to the Presbyterian church to take the College under its patronage, but the request was refused, owing to the fact that the Presbyterians already had two colleges in Western Pennsylvania. The refusal of this appeal was followed by the resignation of President Alden. In 1833, through the activity of Rev. Homer J. Clark, the College came under the control of the Pittsburg Annual Conference of the Methodist Episcopal Church, and Rev. Martin Ruter, D. D., was elected president. As the result of successive divisions of that conference, the control is now vested in the Pittsburg, Erie, East Ohio, and West Virginia Conferences. While the College is under denominational control, the contract between the conferences and the Trustees, who represent several religious denominations, guarantees a liberal and unsectarian spirit in its management.

Location.

Allegheny College is situated in Meadville, Pennsylvania, on the main line of the Erie, and Bessemer & Lake Erie Railroads. An electric road gives direct

connection with Erie and intervening points. Meadville has a population of more than eleven thousand. It is an old and well established town with attractive streets and residences, cultured society, and many educational influences. Being largely a residential town it has few of the disadvantages of city life. It has most of the advantages of a city, such as paved streets, an effective sewerage system, an abundant supply of wholesome water from driven wells, arc and incandescent electric lights, illuminating and natural gas, and an electric street railroad connecting all parts of the town with the college grounds.

The surrounding country is remarkable for its beautiful and diversified scenery. Within a short radius are some twenty miles of ravines of wild and rugged beauty, and the foothills of the Alleghenies which surround the town make the situation one of great attractiveness. The neighborhood is especially rich in material for the study of Botany and Geology.

Buildings and Grounds.

The college campus contains sixteen acres on the north edge of the town, nearly a mile from the business section, at an elevation of two hundred feet above French Creek and twelve hundred feet above the sea. It is abundantly shaded by numerous varieties of trees, many of them planted by students nearly a century ago. The ravine which passes through the campus and the situation overlooking the town and the valley for miles below, give a natural beauty hardly surpassed. The grounds are well provided with granolithic walks, and both grounds and buildings are kept in an attractive and sanitary condition.

The heating plant, situated in the upper ravine, supplies steam heat to all the college buildings. It is entirely adequate to the needs of the College.

Bentley Hall bears the name of Rev. William Bentley, D. D., of Salem, Massachusetts, who gave his valuable library to the College. The corner stone was laid in 1820. It consists of a central three-story building with tower, and two wings with massive pillars. The building contains the administrative offices of the college and recitation and lecture rooms. The third floor is devoted to the halls of the literary societies with their libraries.

During the last summer extensive improvements were made in the interior of the building. New hard wood floors and oak wainscoting were put in, and new furniture throughout has been provided. These changes, made at a cost of about seven thousand dollars, have rendered the building very attractive and entirely modern without lessening its charm as a fine example of colonial architecture.

Ruter Hall, which bears the name of Rev. Martin Ruter, D. D., the second president of the College, is a substantial brick building, erected in 1855, chiefly by the citizens of Meadville. On the first floor are the zoological and geological museums of the college. On the second floor are recitation rooms, a drawing room, an instrument room, and an office, used by the departments of Mathematics and Civil Engineering. The third floor is occupied by the department of Biology. Two laboratories, an office, a store room, and a lecture room are in use.

The building has recently been refitted and refurnished.

Hulings Hall, a four-story brick building, ninety-four by eighty feet, was erected in 1881, by Mr. Marcus Hulings, of Oil City, and citizens of Meadville. It is used as a home for young women, and accommodates about eighty. The building is well lighted and ventilated, is provided with fire escapes, and is in thoroughly good sanitary condition. It has recently been almost entirely refurnished.

An addition to this building, sixty by forty feet, was completed in October 1905, containing on the fourth floor five large society halls, and on the third floor additional students' rooms. The first and second floors and the basement are occupied by the Women's Gymnasium. The gymnasium has a clear floor space fifty-four by forty feet and is finished throughout in Georgia pine. It is provided with a full line of modern apparatus. In the basement are dressing rooms and baths.

Wilcox Hall of Science, named for Mr. and Mrs. Robertson Wilcox, of Girard, Pa., is a modern brick building built in 1892, for the departments of Physics and Chemistry. It contains an amphitheatre lecture room, seating one hundred twenty-five students, chemical and physical laboratories, and basement work shop. There are ten working rooms. In the construction of the building especial care was taken to provide abundant light.

The Gymnasium, erected in 1896, adjoins the athletic field. It is in the early Italian style of round arched architecture, and is constructed of native stone and brick. The building is T-shaped in form, the front portion being two stories high, exclusive of the tower. The first floor contains the director's room,

locker rooms, and baths. On the second floor are the assembly and committee rooms of the Young Men's Christian Association. The gymnasium floor, which occupies the rear extension, has a clear space of forty-five by eighty feet unobstructed by pillars, the roof and running track being suspended from steel trusses. The building is equipped with the appointments of a first class modern gymnasium.

Newton Observatory, completed in 1901, was made possible by the gift of Mrs. Mary M. Newton, of Batavia, Illinois, in memory of her husband, Captain D. C. Newton, once a student in the College. It is a rock-faced stone building of fine architectural appearance, containing in addition to the observing room, a transit room, a computing room, and the director's office. It is equipped with a telescope, with a nine-inch objective made by Brashear, of Allegheny, Pa., and with a smaller instrument, with a seven and one-half inch aperture, made by Alvin Clark and Son, mounted for the special use of students. Other equipment includes a transit, two chronometers, two sextants, and a siderial clock. The clock is the gift of the children of Milton B. Goff, LL. D., in memory of their father, an alumnus and formerly professor of mathematics in the College. The mountings and other fixtures of the observatory were supplied by Messrs. Warner and Swasey, Cleveland, Ohio.

Ford Memorial Chapel was erected in 1901-2 through the generosity of Captain John B. Ford, of Creighton, Pa., in memory of his wife. The cost of the building was $34,000. It is of rock-faced Cleveland sandstone, in Gothic Romanesque style, with a spacious auditorium seating four hundred fifty, besides

a gallery seating one hundred fifty, and an oratory seating one hundred fifty. The rich stained glass windows and the harmonious interior appointments add much to the stateliness of the building.

The chapel is provided with a splendid pipe-organ, the gift of the granddaughters of Captain Ford, Mrs. J. A. Ballantyne and Misses Nellie and Stella Ford, who contributed $6,000 for this purpose. The organ was designed by Mr. W. L. Mayer, of Pittsburg, and was built by the late Julius Neef, of Philadelphia. It has three manuals and 1,920 pipes, and is supplied with the best devices of great modern organs.

The Library Building, the gift of an anonymous donor, was completed in 1902 at a cost of over $40,000. Its dimensions are eighty-five by seventy-four feet. It is constructed of vitrified brick with terra cotta trimmings, in Italian-Renaissance style. In addition to the stack room with a capacity of sixty thousand volumes, it contains a cataloguing room, librarian's rooms, general reading room, and a large reference reading room. On the second floor are the faculty room and departmental seminar rooms. The interior appointments of the library are entirely in accord with the artistic character of the building.

The Preparatory School, completed in February 1906, is situated on land recently acquired northeast of the main campus. It is built of grey vitrified brick and terra cotta in English school style. It contains an office, seven recitation rooms, an assembly room, a gymnasium, a chemical laboratory, society rooms, and cloak rooms. The equipment throughout is new. The cost of the building was twenty thousand dollars.

The cost of the new buildings erected and improvements made the last year amounts to fifty-five thousand dollars. Of this sum Mr. Andrew Carnegie gave twenty-seven thousand dollars. The principal contributors of the remainder were Mrs. Sarah B. Cochran, of Dawson, Pa., who made possible the Women's Gymnasium, and Mr. Frank A. Arter, of Cleveland, Ohio.

Laboratories and Museum.

The Physical Laboratory. The department of Physics occupies the first floor of Wilcox Hall of Science. It comprises a large, well-lighted lecture room, a store room, a general laboratory, two dark rooms, and the professor's office and department library. The lecture room is well adapted for the giving of illustrated lectures; and the department has a very complete projection outfit and a large collection of slides. A number of new pieces of apparatus have just been received, with which the laboratory is being fitted for the study of mechanics; and it is expected that within the year the laboratory will be amply supplied with apparatus for the study of sound, heat, and light. The department, also, has the facilities for the construction of special pieces of apparatus needed in the laboratory.

The Chemical Laboratory. The department of Chemistry occupies the entire second floor of Wilcox Hall. It contains the qualitative and quantitative laboratory, with accommodations for thirty-five students, the balance room, store room, and the professor's office and private laboratory. The laboratories are well lighted and ventilated, conveniently arranged, and well supplied with necessary apparatus and equip-

ment. Each student's table is provided with gas and water. The department library is also located here.

The Biological and Geological Laboratories. These laboratories have been moved during the past summer to the third floor of Ruter Hall where there is ample space and good light. The main laboratory receives the direct north light and is fitted with tables and microscopes for twenty students. In the same room there is placed a large aquarium table fitted with running water, other tables for balanced aquaria, and cases containing the herbarium, and other material used in the laboratory work. The other half of the floor is divided into a lecture room, an office, a store room, and a smaller laboratory for advanced students. The lecture room contains cases for a collection of animals, charts, models, etc., used in lectures. The library, consisting of two hundred well selected volumes, is placed in the smaller laboratory. This room is also fitted with all needed histological, embryological, and bacteriological apparatus. Among the additions to the permanent equipment during the present year are a Minot rotary microtome, three microscopes, and a set of Ziegler's wax models illustrating the development of the chick.

Engineering Apparatus. In Mathematics and Engineering all necessary instruments, such as transits, levels, rods, and chains, for illustrating pure and applied mathematics are provided and are in practical use by the students in those subjects.

The Museum embraces several distinct collections of minerals, shells, fossils, etc.

1. The Prescott Collection, comprising 2,200 specimens of Marine, Terrestrial, and Fresh Water Shells, and about 3,000 specimens of Minerals and Fossils, was collected and mounted by Dr. William Prescott.

2. The Haldeman Collection has 550 excellent and carefully labeled specimens of Minerals, and about 2,000 specimens of Shells, and was purchased by S. S. Haldeman.

3. The Alger Collection.—This collection, made by Francis Alger, contains 5,000 specimens of Minerals, remarkable for their beauty and variety. It embraces also a large number of duplicates, and a handsome cabinet of about 1,500 specimens of Shells.

4. Cabinet of Lithology and Paleontology.—This contains an entire series of the well known Ward Casts, and a very comprehensive and valuable collection of Fossils and Rocks, to which additions are being made.

5. Smithsonian Collection.—In addition to several valuable collections heretofore obtained from the Smithsonian Institution, there have been added over 500 specimens of Land, Marine, and Fresh Water Shells from Panama, Vancouver's Island, and the West Indies, chiefly obtained by Prof. C. A. Adam and authentically labeled by H. Cumming and Dr. P. Carpenter, from the collection of D'Orbigny and Cumming.

6. Natural History Collection.—In addition to the above named collections there are about 1,000 Zoological Specimens, including Birds, Reptiles, Fish, and Marine Animals, which are constantly being increased in number by the exertion of the friends of the department.

These collections greatly increase the scientific advantages of the College and furnish special incentives to the study of Natural Science.

The museum is open every Saturday, while the College is in session, from three to five p. m. At other times visitors are admitted on application to the custodian.

Library and Reading Room.

The library contains more than seventeen thousand volumes, many of them rare and valuable works. Department libraries have been established and have in the last few years attained considerable proportions. In addition to the general library expenditures each department has a liberal annual appropriation which provides the best and most modern technical and reference books. To these libraries and to the reference library students have free access, and thus early become familiar with the correct use of books and acquire something of the bibliographic sense. The reference library and reading room are open at convenient hours daily except Sunday. From the general stacks books may be drawn under the usual necessary regulations. The Reading Room provides for students a wide range of periodical literature, both technical and general.

The periodical list includes the following:

American Naturalist.
American Journal of Sociology.
American Journal of Archaeology.
American Journal of Philology.
American Chemical Journal.
Atlantic Monthly.
Biblical World.
Botanical Gazette.
Bookman.
Century.
Chautauquan.
Classical Review.
Contemporary Review.
Educational Review.
Education.
Engineering News.
Forum.
Fortnightly Review.
Harper's Magazine.
Harper's Weekly.
Homiletic Review.
International Quarterly.
Independent.
Journal of Geology.
Literary Digest.
Missionary Review.
McClure's Magazine.
Mind.
Modern Language Notes.

Nation.
North American Review.
Nineteenth Century.
Outlook.
Popular Science Monthly.
Public Opinion.
Records of the Past.
Science.
Scribner's Magazine.
Scientific American and Supplement.
World's Work.

In addition, the Library is supplied with a large number of daily and weekly newspapers, both religious and secular.

Each of the men's literary societies has in its own room a library of about twelve hundred well selected volumes, which may be withdrawn for home use by members.

In addition to the above libraries, students have free access to the Meadville Public Library, which has a good collection of works of general reference and literature and current fiction.

GENERAL PURPOSE.

This institution is a college not a university. It, therefore, does not undertake to fit the student to enter any profession without further technical study. In all departments of instruction the end sought is not specialization but thorough discipline and correct habits of observation and reflection. It is upon this principle that the curricula are based. For the first two years all subjects are prescribed. These studies are such as have been found to be best adapted to secure symmetrical development. For the last two years a wide range of electives is offered enabling the student to lay the foundation for subsequent professional study By a wise choice of electives a student may in some cases shorten by a year the time required to complete his professional course. The experience of the college proves that its graduates are enabled to distinguish themselves in various careers whenever they have added to their college training the special equipment for such professons.

A large proportion of college graduates enter not upon professional but upon business life. The general principle above stated applies to them with as much force as to those who enter professions. The training of a college does not teach a man how to do business successfully, but it does prepare him to learn any business rapidly, and to attain large success, if he has the requisite talent.

COURSES OF STUDY.

The College offers three courses of study leading to the degree of Bachelor of Arts and two leading to the degree of Bachelor of Science. The entrance requirements for all courses are equal in amount, and substantially equivalent in character. The requirements in English, Mathematics, History, and Science are the same for all courses. Work in two foreign languages is required for all courses, but for the courses leading to the degree of Bachelor of Science, advanced work in Mathematics, Biology, Chemistry, or Physics may be substituted for part of one language. The entrance requirements for all courses are given in detail on the following pages.

The Bachelor of Arts Courses.

1. **The Classical Course** closely adheres to the ideal of the old college course, founded upon thorough work in the ancient languages, English, and History, with enough Mathematics and Science to insure symmetrical mental development, and with a wide range of electives, enabling a student to do special work in favorite lines.

2. **The Latin and Modern Language Course** is identical in purpose and matter with the Classical Course except that modern languages are substituted for Greek.

3. **The Latin-Scientific Course** includes a wide range of scientific work, together with a liberal proportion of culture studies. It is adapted to the needs of those students who desire a course based upon the

humanities, leading to the degree of Bachelor of Arts, but laying particular stress upon scientific subjects.

The Bachelor of Science Courses.

1. **The Scientific Course** emphasizes particularly mathematical and scientific studies, and furnishes a well-rounded equipment for further scientific studies or for the numerous new pursuits opened by modern invention and science.

2. **The Civil Engineering Course** is intended for those who desire to fit themselves for some branch of civil engineering work. It is adapted to the needs both of those who will go immediately into practical work and of those who will pursue advanced technical studies.

Special Students.

Persons desiring to pursue studies in the College are, as a rule, required to be prepared to enter the Freshman class as candidates for some one of the degrees. Under exceptional circumstances, however, persons who are not candidates for a degree may be admitted as special students and allowed to pursue selected studies. Every such person will be required to satisfy the Faculty that he is prepared to do, with profit, the work which he selects. Each case will be decided on its own merits.

REQUIREMENTS FOR ADMISSION.

All subjects required for admission to any of the courses of study are arranged in Groups, which will be found described in detail on the following pages. In all of the groups other authors and other works than those specified will be accepted if fully equivalent in quantity and character.

The particular groups required for admission to each of the several courses will be found designated on pages 32 and 33.

Groups.

I. ENGLISH.—1. *Reading and Practice.* A limited number of books are assigned for reading. The candidate is required to present evidence of a general knowledge of the subject-matter of these books, and to answer simple questions on the lives of their authors. The form of examination will usually be the writing of a paragraph or two on each of several topics, to be chosen by the candidate from a considerable number—perhaps ten or fifteen—set before him in the examination paper. The treatment of these topics is designed to test the candidate's power of clear and accurate expression, and calls for only a general knowledge of the substance of the books. In place of a part or the whole of this test, the candidate may present an exercise book, properly certified to by his instructor, containing compositions or other written work done in connection with the reading of books. In preparation for this part of the requirement it is important that the candidate shall have been instructed in the fundamental principles of rhetoric.

The books set for this part of the examination will be:—

In 1906, 1907, 1908—Shakspere's Macbeth and The Merchant of Venice; Addison's The Sir Roger de Coverley Papers in The Spectator; Irving's Life of Goldsmith; Coleridge's The Ancient Mariner; Scott's Ivanhoe and The Lady of the

Lake; Tennyson's Gareth and Lynette, Lancelot and Elaine, and The Passing of Arthur; Lowell's The Vision of Sir Launfal; George Eliot's Silas Marner.

2. *Study and Practice.* A smaller number of books are assigned for more careful study. The examination upon these books covers subject-matter, form, and structure, and also tests the candidate's ability to express his knowledge with clearness and accuracy. In addition, the candidate may be required to answer questions involving the essentials of English grammar, and questions on the leading facts in those periods of English literary history to which the prescribed works belong.

The books set for this part of the examination will be:—

In 1906, 1907, 1908—Shakspere's Julius Cæsar; Milton's L'Allegro, Il Penseroso, Comus, and Lycidas; Burke's Speech on Conciliation with America; Macaulay's Essay on Milton and Life of Johnson.

II.—MATHEMATICS. (*a*) *Elementary Algebra.*—Fundamental operations, factors, common divisors and multiples, involution including the binomial theorem for positive integral exponents, radicals, quadratic equations, ratio and proportion, theory of exponents, and arithmetic and geometric series.

The text used should be such a book as Tanner's Elementary Algebra.

(*b*) *Plane Geometry.*—The general properties of plane rectilinear figures, similar polygons, areas and the measurement of polygons and the circle; the solution of original exercises, including loci problems.

(*c*) *Solid Geometry.*—The relations of planes and lines in space; the properties and measurement of prisms, pyramids, cylinders, cones, and the sphere; the solution of original exercises, including loci problems.

The text used in geometry should be the equivalent of Beman and Smith's Geometry or Phillips and Fisher's Geometry.

Ordinarily the time spent should not be less than five hour recitations weekly for two full school years.

III. LATIN.—Grammar. The inflections; syntax of nouns and verbs; general sentence structure, including conditional and relative sentences, indirect discourse, and the subjunctive. Prose composition of detached sentences or connected passages based on the texts read. Cæsar, Gallic War, four books. Cicero, seven orations (the Manilian Law to count as two). Vergil, Aeneid, six books. The Roman method of pronunciation is used.

Ordinarily the time spent should not be less than five hour recitations weekly for three full school years.

IV. GREEK.—Grammar. The inflections of nouns and verbs; the principles of the syntax of nouns and verbs; the structure of sentences in general, with particular regard to relative and conditional sentences and to indirect discourse. Prose composition, adapted to test the student's knowledge of grammatical constructions and based on the texts read.

Xenophon: The first four books of the Anabasis and the first two books of the Hellenika. The first three books of Homer's Iliad may be offered instead of the Hellenika.

Ordinarily the time spent should not be less than five hour recitations weekly for two full school years.

V. GERMAN.—Joynes-Meissner Grammar completed; translation of four hundred pages of modern German prose and one classic drama; practice in conversation.

Ordinarily the time spent should not be less than five hour recitations weekly for two full school years.

VI.—FRENCH.—A thorough knowledge of French grammar; ability to read French prose and simple poetry; ability to translate easy passages of English into French; ability to write French from dictation. Students are expected to have read at least five hundred pages of French from at least two well-known modern authors, but no amount of reading will be accepted in place of a thorough knowledge of the grammar. As French is the language of the class-room, it is essential that candidates for admission should have some practice in French conversation.

Ordinarily the time spent should not be less than five hour recitations weekly for two full school years.

VII. HISTORY.—United States, the equivalent of Montgomery's Leading Facts of American History. Eastern Nations and Greece, the equivalent of Botsford's History of Greece. Rome, the equivalent of Botsford's History of Rome. Civil Government, the equivalent of Fiske's Civil Government.

VIII. SCIENCE.—Physical Geography, Gilbert and Brigham. Physiology, Cotton. Natural Philosophy, Hoadley, with experiments.

More extended work in one or two of the above subjects will be accepted in place of shorter courses in the three. Elementary Biology or Chemistry will be accepted in place of one of the subjects.

Groups Required for Admission.

For admission to the several courses the following groups are required:

Classical Course, I., II., III., IV., VII., VIII.

For Group IV. the student may offer Group V. or Group VI. In that case he will pursue the study of Greek for four years in his college course.

Latin and Modern Language Course, I., II., III., VII., VIII., and V. or VI.

For Group V. or VI. the student may offer Group IV. In that case he will take both German and French in his college course—two years of the former and one year of the latter.

Latin-Scientific Course, I., II., III., VII., VIII., and IV. or V. or VI.

Scientific Course, I., II., III., VII., VIII., and V. or VI.

For Group III. an eqnivalent amount of work in one modern language may be offered; or work in a modern language equivalent to two-thirds of the Group, and one of the following subjects:

1. Mathematics, including college Algebra, Plane and Spherical Trigonometry.

2. Chemistry.
3. Biology—(Zoology, or Botany, or both).
4. Advanced Physics.

The time spent must have been not less than five hour recitations weekly for a full school year. If 2 or 3 or 4 is offered, laboratory work must have formed an important part of the work, and laboratory note books and other evidence of the work done, must be presented, all properly certified by the teacher.

Civil Engineering Course. The requirements are the same as for the Scientific Course.

Admission with Conditions.

Students who have not fully completed the subjects specified for the course they wish to enter may be admitted to the Freshman Class conditionally, but not if the sum of their deficiencies exceeds a half year's work, nor if in the judgment of the Registration Committee they are not fitted to do college work to advantage. They will be admitted to such college classes as they may be qualified to enter and will be given an opportunity to remove their deficiencies in the Preparatory School. Under certain fixed restrictions credit may be obtained at entrance for work done in college subjects and such advanced credit may be offset against deficiencies in preparatory work until the latter can be removed.

All admission conditions must be removed before the beginning of the Sophomore year.

Entrance Examinations.

Examinations for admission are held on Monday and Tuesday of Commencement week, and on Monday and Tuesday preceding the opening of the Fall Term.

All examinations except those taken in Meadville are under direction of the College Entrance Examination Board, whose certificates are accepted in place of examinations in all subjects.

Admission by Certificate.

Certificates for all the work required for admission will be received from approved schools. But students entering by certificate are considered as on trial until the completion of the mid-year examinations, and the right is reserved to require further preparatory work from students who are not able to make satisfactory progress in college classes.

In all cases an examination in English is required, adapted to test the student's power of correct and idiomatic expression. No one will be accepted in English whose work is notably defective in point of spelling, punctuation, idiom, or division into paragraphs.

Principals of schools desiring to be placed on the approved list are invited to address the President.

Diplomas from the Regents of the State of New York will be accepted. All other certificates must be made out on special blanks, which will be sent on application.

The applicant for admission should also bring with him all laboratory note-books, exercise books, mounted specimens, and other evidence of work done, properly certified by the teacher.

All candidates for admission must present satisfactory testimonials of good moral character; and certificates of regular dismission will be required from those who have been members of other colleges.

COURSES OF INSTRUCTION
BY DEPARTMENTS.

In this detailed description of the courses of instruction the number of "hours" refers to the number of hour recitations weekly. Each term is eighteen weeks in length.

All courses are offered yearly, except as specially noted.

Any elective course may be withdrawn if not chosen by at least four students.

Two hours of laboratory work are counted as equivalent to one recitation hour.

Astronomy.

The courses in Astronomy have two objects in view. Course I. is a general descriptive course, designed to give the student a comprehensive view of the science, and to acquaint him with the history of the growth of the universe, and the laws which govern its members.

Course II. gives the student an opportunity to study the members of the Solar System, the Moon, Star Clusters, and Nebulae, with the nine-inch Equatorial in the Newton Observatory.

Course III. is practical, and is intended primarily for engineering students. In this course, the student becomes familiar with the use of the transit and the sextant in determining time, latitude, and longitude.

COURSE I.—General Descriptive Astronomy. A study of the earth and its relations to the other members of the solar system; the laws which govern the phenomena of the solar system; and a general descriptive outline of the heavenly bodies. Open to those who have had Mathematics I.

Second term, three hours.

COURSE II.—Observational Astronomy. A general course in practical astronomy. The student will become acquainted

with the use of the equatorial for the study of the heavenly bodies. Supplementary to Course I.—The number electing the course will be limited to eight students.

Second term, one hour.

COURSE III.—Practical Astronomy. Determination of time, latitude, and longitude, by the transit and sextant. Open to those who have completed Mathematics I. and II., and Astronomy I. Designed especially for engineers, and those who wish to teach astronomy.

First term, two hours.

Biology.

It is the aim of this department, on the one hand, to give the student a general knowledge of the fundamental facts and principles of Biology; on the other hand, to familiarize him with the methods of investigation in this science as a preparation for advanced work and original research. Courses I., II., III., and IV. are adapted to meet the needs of a general college training. Courses V. and VI. are intended for those who expect to become professional biologists, science teachers in high schools, or physicians. Practical work in the laboratory forms a valuable part of the training of each course.

COURSE I.—Elementary Zoology. A study of historical and systematic Zoology, and the morphology, physiology, development, distribution, and evolution of animals. An attempt is made in this course to give the student a comprehensive summary of the whole science so that he may better understand the biological phenomena which he meets every day. The course is especially planned to meet the needs of those who do not have the opportunity to pursue the subject further, but at the same time it serves as a basis for the more advanced courses in Zoology. The laboratory work consists of the study of the external morphology of a series of typical animals, karyokinesis, histology, embryology of the starfish, etc. Lec-

tures and recitations three hours a week, laboratory work two hours a week.

First term, four hours.

COURSE II.—Elementary Botany. A course in Botany similar to the course in Zoology outlined above except that more attention is given to ecology. The laboratory work consists of the study of a series of typical plants—Spirogyra, Moulds, Mosses, etc. This course forms the second part of Course I. and should be taken the same year, though they may be taken independently. Lectures and recitations three hours a week, laboratory work two hours a week.

Second term, four hours.

COURSE III.—Advanced Zoology. Habits and structures of animals. The laboratory work of this course consists of the careful dissection of at least one type form of each of the great groups of animals. This is followed by a recitation in which the habits of these animals are given. These type forms are then compared with the other closely related animals. Lectures and recitations one hour a week, laboratory work four hours a week. Elective for all who have completed Course I.

Throughout the year, three hours.

Given in 1906-7.

COURSE IV.—Advanced Botany. Plant morphology and physiology followed by a study of all the great groups of the plant world, discussing their essential characteristics and relationships. Lectures and recitations one hour a week, laboratory work four hours a week. Elective for all who have completed Course II.

Throughout the year, three hours.

Given in 1907-8.

COURSE V.—Vertebrate Histology. Training in the preparation of tissues for examination under the microscope. Each student prepares at least one hundred slides of vertebrate tissues which are later studied and described. This course is especially valuable for teachers or for those intending to study medicine. Laboratory work with occasional lectures, eight

hours a week. Elective for all who have completed Course III.

First term, four hours.

COURSE VI.—Vertebrate Embryology. A study of the development of the chick up to the end of the third day. Most of the slides studied are furnished to the students, but each student is required to prepare whole mounts and several sets of serial sections. Laboratory work with occasional lectures, eight hours a week. Elective for all who have completed Course V.

Second term, four hours.

Additional Courses.—Additional courses will be offered, subject to certain limitations, when there is sufficient demand for the work.

Chemistry.

The courses in this department are planned chiefly for a cultural training. The aim is to give the student a correct idea of the method of reaching scientific results in general and at the same time to lead to independent research both for mental discipline and for the acquirement of real knowledge of the subject. The practical work in the laboratories is emphasized and forms a large part of each course.

COURSE I.—Inorganic Chemistry. The principles of the science in connection with a study of the non-metallic elements and compounds are given in this course. Practice in the writing of chemical equations and in the solution of chemical problems is emphasized. The lectures are illustrated with experiments which are, as far as possible, repeated by the students in the laborafory. Lectures and recitations three hours a week, laboratory work two hours a week.

First term, four hours.

COURSE II.—Inorganic Chemistry. A continuation of Course I. It includes a study of the metallic elements and their compounds, and is introductory to Course III. Lectures and recitations two hours a week, laboratory work three hours a week. Open to those who have completed Course I.

Second term, four hours.

COURSE III.—Qualitative Analysis. Special attention is given in this course to the analytical reactions of each one of the more common inorganic bases and acids. The more intimate knowledge of the elements and their compounds thus gained enables the student to generalize and classify chemical phenomena. Thorough practice in the separation of metals and acids from each other in unknown liquid and solid mixtures and in the preparation of minerals for analysis is given. Laboratory and lectures six hours a week throughout the year. Open to those who have completed Course II.

Throughout the year, three hours.

COURSE IV.—Quantitative Analysis. The aim of this course is to give a thorough knowledge of the principles of gravimetric and volumetric analysis, and their applications in the separation and determination of the common bases and acids from salts, minerals, etc. It is of especial value as a training in the more refined methods of manipulation, neatness, and accuracy. Laboratory and lectures six hours a week throughout the year. Open to those who have completed Course III.

Throughout the year, three hours.

COURSE V.—Organic Chemistry. A course covering the Chemistry of the hydro-carbons of both the paraffin and benzene series, and their derivatives. Lectures and recitations three hours a week. Open to those who have completed, or are taking, Course IV.

Throughout the year, three hours.

COURSE VI.—Organic Chemistry. A laboratory course comprising the methods of preparation and purification of a number of typical organic compounds and the detailed study of their properties, reactions, and relations. Six hours of laboratory work a week. Open to those who have completed, or are taking, Course V.

Throughout the year, three hours.

Economics.

Particular attention is given to the study of the development of economic life and institutions, American conditions being specifically analyzed. Students are

made familiar with the accepted principles of the science and are given a practical acquaintance with the complex modern economic organization. Encouragement is also offered to individual research, leading to possible future specialization. Lectures, papers, and comparative examination of various authorities constitute the method of instruction.

COURSE I.—Principles of Economics. Introductory survey of industrial history; Production and Distribution, compassing the accepted elements of the science. The text used is Saeger's Economics, and required readings are assigned in Marshall's Principles of Economics and in the Austrian authorities.

First term, three hours.

COURSE II.—Applied Economics. This is a continuation of Course I. and is a detailed examination of the economic principles applied in trusts, labor, tariff, taxation, and finance. Social economics as presented in Wright's Practical Sociology is included. Lectures, conferences, papers, and individual investigations are the methods of instruction.

Second term, three hours.

COURSE III.—Economic Theories. History of the development of economic thought including a study of the leading principles of the science as propounded in Adam Smith, Ricardo, Mill, Senior, Menger, Weser, Bohm Bawerk, Walker, and Clark. The seminar method is used. Open to a limited number of those who have completed Courses I. and II.

First term, two hours.

COURSE IV.—Transportation. A course of lectures on the American Railway—a study of railway economics and the problems of government regulation. An extensive use is made of the Inter-State Commerce Commission findings and national industrial data. Open to advanced students.

Second term, two hours.

Engineering.

The instruction in this department covers the technical subjects that lie at the basis of engineering work.

Constant use is made of instruments and much of the work consists of actual field work. With the exception of Course I. the subjects are open only to students in the Civil Engineering Course.

COURSE I.—Surveying, with level, transit, and compass. Methods of determining areas. Laying out and dividing land; city surveying; plotting and topographical drawing.

Second term, three hours.

COURSE II.—Railroad Engineering. This course includes a reconnaissance, preliminary and location surveys, and estimates for a line of about one mile in length through as difficult a country as is usually encountered. Plots and working drawings.

First term, three hours.

Since Engineering I. and II. consist largely of field work, students taking them must be careful to arrange their work in such a way as to leave their afternoons free for such practical work.

COURSE III.—Highway Engineering. Methods of constructing Macadam, Telford, gravel, and earth roads; wood, stone, brick, and asphalt pavements for cities; and the methods of maintaining country roads and city pavements.

Strength and Resistance of Materials. Foundations on land, on piles, and under water. The building of stone, brick, and concrete masonry. Masonry dams, retaining walls, bridge abutments and piers, culverts, arches, and sewers.

Throughout the year, three hours.

COURSE IV.—Bridges and Roofs. Including analytical and and graphical determination of the stresses in bridges and roofs together with a study of actual structures. Designs of a simple roof truss and of a simple highway bridge with working drawings.

Throughout the year, four hours.

English Bible.

The work in this department is intended to open to the student the rich stores of literature contained in the Bible; to familiarize him with the history of the Hebrew people, their civilization, and their influence on the world; and to lead to the critical study of the spirit and form of Hebrew literature as it is shown in the English version. The English Bible is studied as a great monument of our literature and as the source of our knowledge of one of the great civilizations of the world. The courses do not touch questions of doctrine or belief.

COURSE I.—A General Introduction to the English Bible. This course takes up the history of the Hebrew, Greek, and English Bibles, and then passes on to a study of the different types of literature to be found in the Old and New Testaments. Each type is studied as a whole both from the historical and literary points of view, after which examples of each are taken up for more detailed study. The course is an introduction to the more elaborate courses that follow. It is made up wholly of lectures and reference work, and, since it forms a part of English I., each student is required to keep carefully written note-books, which are at intervals examined by the instructor in English.

Throughout the year, two hours.

COURSE II.—New Testament History and Literature. Stress is here laid on the importance of understanding the political, social, and religious background of the New Testament. To that end the Maccabean and Roman periods of Jewish history are carefully studied. The New Testament literature is treated from the standpoint of its relation to the development of church life and thought rather than from the point of view of literary form.

Throughout the year, two hours.

Given in 1907-8.

COURSE III.—Old Testament History and Literature. The method here pursued is similar to that in the preceding course. The history of Syria and Palestine from the earliest times down to 165 B. C. is first studied. The Old Testament literature is then taken up in the order of its historic development, and its relation to the life, thought, and external history of Israel is brought out. This and the preceding course aim to give a comprehensive grasp of biblical history and literature.

Throughout the year, three hours.

Given in 1906-7.

English Language and Literature.

The aim of this department is to give the student such thorough instruction in the writing of English as will make his language the instrument in his hand for the easy, idiomatic, and energetic expression of his thought; to train him, both by theory and practice, for natural and effective public address; to acquaint him with the essential facts in the development of the English language and literature, and with the great authors who have created that literature; and, finally, to render him sensitive to the literary and aesthetic values of life. Rigorous and painstaking habits of scholarship are constantly inculcated; but the student is never allowed to forget that literature is vital—that it draws its subject-matter and its inspiration from life, and in turn transmutes the crude and imperfect forms of life into beauty and character.

COURSE I.—The Elements of Rhetoric, and collateral reading. The chief purpose of this course is to train the student in the use of easy, idiomatic English. It is believed that successful instruction in rhetoric depends not so much upon precept as upon example and practice; so the student is encouraged to write freely upon subjects that appeal to him, and that spring naturally from the interests and activities of his daily life. The instructor corrects each paper in detail, and makes ap-

pointments with each student for private consultation. The instruction is made extremely flexible, and freshness and variety of method are constantly sought.

Throughout the year, one hour.

Public Speaking. One hour weekly is devoted to Course I. in Public Speaking.

English Bible as literature. This work is described under English Bible I.

The above three subjects are scheduled together as English I., and are to be taken at the same time.

Throughout the year, four hours.

COURSE II.—Advanced Rhetoric. A careful study of the four great forms of discourse, Narration, Description, Exposition, and Persuasion The method of instruction is both critical and constructive. Lectures, text-book, and class discussion. Fortnightly themes are required; and provision is made for private consultation with the instructor.

First term, three hours.

COURSE III.—Introduction to English Literature. 1. An outline history of the development of English literature. Moody and Lovett's A History of English Literature. 2. Collateral reading. 3. The study and interpretation, in class, of Shakspere's Hamlet, Milton's Minor Poems, and Pope's Rape of the Lock. Oral recitation, lectures, class discussion, and written tests.

Second term, three hours.

COURSE IV.—English Poetry from 1789 to 1832. Copious readings fom the poetry of Burns, Wordsworth, Scott, Byron, Shelley, and Keats. At the beginning of the year, several lectures are devoted to the setting forth of the historical, social, religious, and literary conditions that gave rise to the literature under consideration. The constant aim is to arouse in the mind of the student an intelligent enthusiasm for the great poetry of the period; and, while holding him to accurate and diligent scholarship, to show him how life and literature interpenetrate.

Open to those who have completed Courses I., II., and III.

Throughout the year, three hours.

Given in 1906-7.

COURSE V.—The Victorian Period of English Literature. Landor, Carlyle, Tennyson, Arnold, Ruskin, and Browning. Conducted in the same manner as is Course IV., with which it alternates.

Throughout the year, three hours.

Given in 1907-8.

COURSE VI.—Elements of Literary Criticism. Winchester's Principles of Literary Criticism. A systematic inquiry into the essential elements of literature, and a detailed consideration of the various forms of literature. A considerable amount of illustrative reading is expected, and the student is required to test two or three classic productions by a practical application of the principles of criticism.

Open to those who have taken Course IV. or Course V., and for a limited number who have taken Course III.

First term, two hours.

Given in 1906-7.

COURSE VII.—American Literature. Outlines of its development. Lectures upon representative authors. The critical study and interpretation of masterpieces. Appreciations and essays by members of the class.

Elective under the same conditions as Course VI.

Second term, two hours.

Given in 1906-7.

COURSE VIII.—Prose Fiction. Bliss Perry's A Study of Prose Fiction. The novel, the romance, and the short story. Studies in the structure and significance of these popular forms of modern English fiction. Illustrative readings and carefully prepared papers.

Elective under the same conditions as Course VI.

First term, two hours.

Given in 1907-8.

COURSE IX.—Shakspere. Analytic and interpretative studies of four plays of Shakspere, As You Like It, Othello, King Lear, and The Tempest. A careful reading of Dowden's

Shakspere Primer will be required in connection with this course.

Elective under the same conditions as Course VI.

Second term, two hours.

Given in 1907-8.

French Language and Literature.

It is the aim of the courses in this subject to give to the student (1) an accurate knowledge of the language of the present time both as written and spoken; (2) an appreciation of the more important masterpieces of the literature proportionate to the knowledge of the language; and (3) a knowledge of the historical development of the literature.

The work as above outlined is carried on by means of recitations, the writing of prose and essays, the hearing of lectures in French, and by collateral readings. Much stress is laid from the beginning upon the ability of the student to express himself directly in the language. With this end in view the work of the class-room is conducted in French, and phonetic methods are employed in order to give accuracy of pronunciation.

COURSE I.—Elementary French. Fraser and Squair's Grammar is used as a reference book. Oral and written exercises. Dictation. Reading of such easy prose as Guerber's Contes; Halevy, L'Abbe Constantin; De La Brete, Mon Oncle et Mon Cure. Memorizing selected fables of La Fontaine.

Throughout the year, four hours.

COURSE II.—Elementary French Continued. Reading of such authors as George Sand, Merimee, Daudet, Augier, Dumas, etc. Memorizing of selected poems. In this course

brief outlines of the history of literature are also given with collateral readings from celebrated authors.

Throughout the year, four hours.

COURSE III.—French Literature in the Seventeenth Century. A study of the drama and of the miscellaneous literature of the period. Corneille, Racine, Moliere, La Fontaine, Pascal, Bossuet, Fenelon, Mme. de Sevigne.

Throughout the year, three hours.

Not offered in 1906-7.

COURSE IV.—French Literature in the Eighteenth Century This course will treat of the time and influence of Voltaire, Montesquieu, Rousseau, the Encyclopedists, Beaumarchais, Lesage, Andre Chenier.

Not offered in 1906-7.

Throughout the year, three hours.

COURSE V.—French Literature in the Nineteenth Century. A study of the principal authors of this period. Chateaubriand, Lamartine, Victor Hugo, Alfred de Vigny, Alfred de Musset, Theophile Gautier, La Conte de Lisle, Sainte-Beuve, Balzac, with a brief survey of contemporary writers.

Throughout the year, three hours.

COURSE VI.—Lyric Poetry of the Nineteenth Century. In this course the different schools of poetry will be discussed and copious extracts will be read from representative poets, such as Lamartine, Victor Hugo, Alfred de Musset, Alfred de Vigny, Theophile Gautier, Le Conte de Lisle, Sully Prudhomme, Francois Coppee.

Open to those who have completed Course IV. or Course V.

First term, two hours.

COURSE VII.—The Theatre in the Nineteenth Century. In this course the development of the theatre during the period will be studied in detail. Dramas of such representative authors as Victor Hugo, Scribe, Alexandre Dumas, Augier, Sardou, Rostand, Meilhac and Halevy, will be read and discussed.

Open to those who have completed Course IV. or Course V.

Second term, two hours.

Geology.

The course in Geology is eminently a general culture course, explaining as it does so many common phenomena and leading the student to take a greater interest in natural objects. The class work is supplemented by practical work in the field, museum, and laboratory.

COURSE I.—Structural and Dynamic Geology, as illustrated by the region about Meadville. The field work consists of a number of excursions (usually six) to points of interest in the immediate vicinity. Recitations three hours a week. Open to those who have completed Chemistry I.

First term, three hours.

COURSE II.—Historical Geology and Paleontology. Chiefly the history and stratigraphy of the North American continent. During this term the laboratory work consists of the study of a series of typical fossils. Recitations two hours a week, laboratory work two hours a week. Open to those who have completed Biology I. and Geology I.

Second term, three hours.

German Language and Literature.

The methods employed in the first two years of the course are intended to establish a broad and thorough foundation for an appreciative study of German literature in the advanced courses. Accurate and intelligent pronunciation is insisted upon; and the principles of phonetics are presented in simple form and are put to practical use in the reading exercises in the class room. Translation from German into English is employed at the outset, but is discarded when it is no longer needed as a test of the understanding of the text. In prose composition more attention is given to reproductive exercises and theme-writing than to translations. The oral use of the German lan-

guage in the class room will be constantly increased until the recitations are conducted entirely in German.

A German Conversation Club, in which a special opportunity for linguistic practice is afforded, has been founded among the students of the college. Membership is open to those who have studied German for one or more years.

COURSE I.—Elementary German. Spanhoofd's Lehrbuch der Deutschen Sprache; Huss's German Reader; Storm's Immensee; Baumbach's Im Zwielicht, and Heyse's L'Arrabbiata. The aim of the course is to enable the student to read and understand accurately, without translation, German prose of ordinary difficulty and to acquire some proficiency in writing and speaking German. Prose composition based on the texts read is a part of this work.

This course represents from five to six terms of ordinary high school work, but may not be taken to remove language requirements for admission to college.

Throughout the year, four hours.

COURSE II.—Intermediate German. First Term.—Schiller's Wilhelm Tell; Lessing's Minna von Barnhelm; Goethe's Hermann und Dorothea begun. German composition once a week.

Second Term.—Hermann und Dorothea completed; a modern novel; Sudermann's Frau Sorge, or Freytag's Soll und Haben. Reproductive translation into German and independent themes are a part of the work.

Open to students who have presented two years of German for admission to college or who have completed Course I.

Throughout the year, four hours.

COURSE III.—Advanced German. First Term.—Select Readings from the novels of Freytag, Kellar, Scheffel, Sudermann, and Frenssen. The history of German literature during the nineteenth century, with its origins in the eighteenth, will be studied, especially the history of the novel.

Second Term.—Schiller's Wallenstein and Thirty Years' War. A study of the political and social background of the picture

unfolded in Schiller's dramatic trilogy will be made by reading selections from his Thirty Years' War and doing other reference work in history. Lectures and reports on the life and literatary activities of Schiller are a prominent feature of this course. Open to those who have completed Course II.

Throughout the year, three hours.

COURSE IV.—Goethe's Life and Works. First Term.—Goethe's Life and Works. Goethe's autobiography, in connection with which several of the earlier productions of the author, especially Die Leiden des jungen Werther, will be read; then the classical dramas, Egmont, Iphigenie auf Tauris, and Torquato Tasso, will be taken up.

Second Term.—Goethe's Faust, Part I., with an outline of Part II., and a history of the Faust legend, will be studied in lectures and recitations.

The reading and interpretation of Goethe's works will be supplemented by a course of lectures on the classic period of German literature. Open to those who have completed Course III.

Throughout the year, two hours.

Given in 1906-7.

COURSE V.—Outline History of German Literature. The aim of this course is to acquaint the student with the most important movements in the history of German literary life, from the earliest times to the twentieth century, special attention being paid to the two classic periods of the twelfth and eighteenth centuries. Koch's Geschichte der deutschen Litteratur will be used as a text-book, which will be supplemented by lectures in German and reports on assigned readings.

Open to those who have completed Course III., and to others by permission.

Throughout the year, one hour.

Course V. may be taken only in connection with Course IV. or Course VI.

COURSE VI.—German Romantic School and Modern German Drama. First Term.—Romantic School, with reference to its social and literary aspects.

Second Term.—The study of German life in the nineteenth century as reflected in the dramas of Heinrich von Kleist, Grillparzer, Hebbel, Anzzengruber, Wildenbruch, Sudermann,, and Hauptmann.

Open to students who have completed Course III.

Throughout the year, two hours.

Given in 1907-8.

Graphics.

The work in this department is eminently practical. The actual needs of engineers are kept in mind, and the work is adapted theretto. The courses are open only to students in the Civil Engineering Course.

COURSE I.—Free Hand Drawing. Elementary Drawing, including a thorough training of the hand and eye in outline drawing, shading, and lettering.

First term, four hours.

COURSE II.—The use and care of instruments, projection drawing, isometrical and cabinet drawing, and the principles of shading and tinting.

Second term, four hours.

COURSE III.—Descriptive Geometry, as applied to the representation by projection of all Geometrical Magnitudes, the intersections and tangencies of developable, double curved, and warped surfaces. Spherical projections, shades and shadows, and linear perspective.

Throughout the year, four hours.

COURSE IV.—Topographical and Machine Drawing, including tracing and blue-printing.

First term, three hours.

COURSE V.—Architectural Drawing. Working drawings of a frame building.

Second term, three hours.

Greek Language and Literature.

The aim of the department is to lead the student to the acquisition of a living knowledge of the Greek language as an introduction to a practical acquaintance with Greek life and thought. It is believed that by careful and accurate work in the first years of the language the student can gain such knowledge as will enable him to read widely and independently. The courses laid down are such as are thought to be best adapted to that end. The work is varied, and an attempt is made to give a view of all departments of the literature. The department possesses a growing collection of casts of antique sculpture, painted vases and other antiquities, about a thousand photographs, and several hundred lantern slides.

A voluntary class is formed each year for the purpose of special drill in sight reading.

COURSE I.—Homer. The Iliad or the Odyssey. Detailed study of two or three books and rapid reading of as much more as the time allows. This rapid reading of the Homeric poems as literature is made the basis of the study of early Greek life and civilization.

Xenophon, Memorabilia. The more interesting and important passages are carefully read in class. A weekly exercise in composition is based on the Greek text read. The aim is to develop a vocabulary and an accurate knowledge of Greek Syntax.

Throughout the year, four hours.

COURSE II.—Plato, Apology and Crito and selections from Phaedo. Outline of Greek Philosophy.

Lysias and Demosthenes.—Selected orations from both these writers are read in connection with a detailed study of the historical periods.

Greek Literature, text book and lectures. Assigned readings on

special topics in Greek history and literature. Reading at sight.

This course is made the basis of the study of historical Greek life and civilization.

Throughout the year, three hours.

COURSE III.—A. Greek Drama. Detailed study of two plays and rapid reading of several others. Usually the following will be read: Aeschylus' Agamemnon. Sophocles' Oedipus Tyrannus, Euripides' Medea, and Aristophanes' The Frogs. Individual investigation of special topics. The course is made not only a study of the rise and development of the Greek Drama, but also a study in literary evolution.

Throughout the year, three hours.

B. Greek Oratory.—Andocides, Isocrates, Demosthenes. The history and politics and the public and private antiquities of the times. Lectures and assigned readings in Greek, English, and German.

Throughout the year, three hours.

One of these courses is given each year. In 1905-6 B. was given. Open to all who have completed Course II.

COURSE IVA.—Classical Archaeology. Egyptian, Babylonian, and Assyrian Art. Greek Architecture. Greek Vase Painting.

Throughout the year, two hours.

Given in 1906-7.

COURSE IVB.—Classical Archaeology. Greek Sculpture.

Throughout the year, two hours.

Given in 1907-8.

Courses IVA. and IVB. are given in alternate years. The instruction is mainly by lecture, but text books are used and a large amount of collateral reading is required. The courses are open to those who have completed Course I., and, under some limitation, may be elected by students having no knowledge of Greek.

COURSE V.—Greek Testament. A minute and critical study of a portion of the New Testament to insure a familiar and accurate knowledge of vocabulary, syntax, and idioms, followed

by more rapid reading to develop ease and rapidity in grasping the thought of the original. The purpose of the course is to lay the foundation for exegetical work. Open to all who have completed Course II.

Throughout the year, two hours.

Given in 1906-7.

COURSE VI.—Greek Literature. A careful survey of the field from Homer to the Roman Period. One hour a week is devoted to lectures and text-book work, one hour is given to critical readings in English translations and two hours to readings in Greek. Open to all who have completed Course II.

Throughout the year, four hours.

Given in 1907-8.

COURSE VII.—Greek Literature in English. The course consists of the lectures, text-book work, and English readings of Course VI. It may be elected by students having no knowledge of Greek.

Throughout the year, two hours.

Given in 1907-8.

Hebrew.

COURSE I.—Davidson's Hebrew Grammar, completed. Twelve or more chapters in Genesis read.

Throughout the year, four hours.

This course is given in alternate years.
Given in 1907-8.

History.

The aim of the department is to give that knowledge of the facts and the philosophy of history which belongs to a liberal education. The subjects in periods and countries are planned also to train for university work or to equip for preparation to enter law or journalism. The evolution of European civilization from its sources and the growth and the influence of Anglo-Saxon institutions are the general theme of the work. History is presented as a real educative process. The depart-

ment has the appropriate library authorities for the several courses, and source materials are freely used. Abstracts, maps, essays, and outlines are required in the class work. The method of instruction is a combination of lectures and text-book. Course I. is required for admission to the succeeding courses.

COURSE I.—European History. The period covered extends from the Teutonic migration to the French Revolution. The first term is occupied with mediaeval institutions and the transition to Modern Europe. Robinson's European Readings and Bemont and Monod's Mediaeval Europe are the texts for class guidance. Required readings in standard authorities are assigned. The second half-year is devoted to the growth of nationalities and the religious and political struggles for balance of power. Lodge's Modern Europe furnishes the outline of the work.

Throughout the year, three hours.

COURSE II.—The Renaissance and the Reformation. The first term is devoted mainly to the Renaissance in Italy and subordinately in England. The political, intellectual, literary, and aesthetic phases of the movement are studied. Burckhardt and Symonds are the authorities used, with Einstein for the English Renaissance. The second term is occupied with the Reformation from Wycliffe to the Peace of Westphalia. The texts are Hausser and Fisher. This course alternates with Course III.

Throughout the year, three hours.

Given in 1907-8.

COURSE III.—French Revolution and Nineteenth Century. The first term follows the causes and the course of the French Revolution and concludes with the Napoleonic Era. A lecture course with references to many authorities, Stephen's Revolutionary Europe and Rose's Napoleon being required.

The second term examines Europe in the Nineteenth Century after the Congress of Vienna, studying the formation of the German and the Italian unity and the continental triumph of

liberalism. Seignobos' Europe and Fyffe's Modern Europe are used as outlines of the work.

Throughout the year, three hours.

Given in 1906-7.

COURSE IV.—History of England. The work extends from the Teutonic origins to the Nineteenth Century. Lectures, collateral readings and text-books. Gardiner's Student's History and Green's Short History of the English People furnish the outline and references are required in the constitutional histories of Stubbs, Hallam, and Taswell and Langmead, and in the works of Froude, Gardiner, and Lecky. This course alternates with Course V.

Throughout the year, two hours.

Given in 1906-7.

COURSE V.—The Political and Constitutional History of the United States, from 1781 to 1861. The sources are extensively used as found in the government publications, the writings and addresses of statesmen, and the contemporary interpretation of national affairs. Lectures and reports by students on assigned readings in Schouler, Henry Adams, McMaster, Gordy, Rhodes, and the American Statesmen Series. Monographs required of the class each term.

Throughout the year, two hours.

Given in 1907-8.

Italian Language and Literature.

COURSE I.—Elementary Italian. Italian Grammar, Grandgent. Oral and written exercises. Dictation. Texts such as De Amicis, Cuore; Salvatore Farina, Il Signor Io; Goldoni, Il vero Amico. Open to Juniors and Seniors.

Given in 1907-8.

COURSE II. Literature in the Thirteenth and Fourteenth Centuries. Dante, La Divina Comedia; Petrarca, Rime Scelte. Open to Juniors and Seniors.

Throughout the year, two hours.

Given in 1906-7.

Latin Language and Literature.

The courses in the Latin department are intended to direct the student to a systematic study of the language and its development, to acquaint him through a varied reading of the best authors with the leading features of the literature, and to make him familiar with the main facts of Roman life and civilization. Technical Grammar and Composition are studied only in so far as they contribute to the comprehension of the language. The department is well equipped with books, maps, and facsimiles of inscriptions and has a small collection of photographs.

The instruction is given by means of recitations supplemented by lectures, and, in the elective courses, by individual work.

COURSE I.—Cicero, De Senectute with Selections from De Amicitia, for rapid and sight reading.

Livy, Books XXI-XXII, or selections from Books I-XXV.

Weekly exercises in prose composition.

This course includes a detailed review of Latin case structure and syntax, and a specific effort is made to teach right habits of reading and translation. In connection with Livy is made a careful study of the geography of Spain and Italy and of the history of Rome during the Second Punic War. Attention is also directed to the literary characteristics of Livy and of his age.

Throughout the year, four hours.

COURSE II.—Horace, Odes, Epodes, and Satires.

The more common metrical structures are studied so that the Latin can be read with ease. Especial attention is directed to Horace's literary and political life and to as much of the history of the period as sheds light on the subject matter.

Catullus, selected Odes ; general discussion of Latin Lyric Poetry.

Plautus and Terence, one play each. In connection with the translation of Plautus and Terence, the course includes lec-

tures on the origin and development of comedy in Rome and on the Roman Theatre. The plays are also made a basis for the investigation of syntactical problems.

Throughout the year, three hours.

COURSE III.—Tacitus, Annals Books I-II. The character of Tiberius and the upbuilding of the principate are studied by collateral readings from Suetonius and Velleius Paterculus.

Pliny, Letters. The text is used as a basis for studies in Roman private life.

Quintilian, Institutions X. The origin of Roman literary forms.

This course alternates with Course IV. Open to all who have completed Course II.

Throughout the year, three hours.

Given in 1906-7.

COURSE IV.—History of Latin Literature. Lectures are given, alternating with illustrative readings in both Latin and English, from various authors studied. A text-book is used, with assigned work in the various manuals in the library.

This course alternates with Course III. Open to all who have completed Course II.

Throughout the year, four hours.

Given in 1907-8.

COURSE V.—Latin Literature in English. This course consists of the lectures, text-book work, and English readings of Course IV. It may be elected by students without knowledge of Latin.

Throughout the year, two hours.

Given in 1907-8.

COURSE VI.—Roman Philosophy. Cicero, Tusculan Disputations, Book I.; Lucretius, De Rerum Natura, Books I., III., V.

The purpose of this course is to give a general knowledge of the whole field of ancient philosophy, with a careful study of the Stoic and Epicurean systems. Lectures are given, supplementing Mayor's Ancient Philosophy and Zeller's Stoics, Epicureans, and Sceptics.

This course alternates with Course VII. Open to all who have completed Course II.

Throughout the year, two hours.

Given in 1906-7.

COURSE VII.—Introduction to Latin Epigraphy; Roman Topography.

In Epigraphy, lectures and exercises are given, based on Egbert's Latin Inscriptions. During the latter part of the year, a study of the topography, architecture, and monuments of Rome is made.

This course alternates with Course VI. Open to all who have completed Course II.

Throughout the year, two hours.

Given in 1907-8.

Mathematics.

The elementary courses in mathematics, all of which are prescribed for students in engineering and sciences, are: College algebra, plane and spherical trigonometry, analytic geometry including conic sections, and differential and integral calculus. These courses may all be taken in the freshman and sophomore years. They serve as a sufficient preparation for the ordinary work in physics and physical chemistry, and they mark the minimum of attainments that a teacher of mathematics in a high school or academy should possess.

Courses III.-VI. are elective and presuppose Courses I. and II.

COURSE I.—Algebra. The following topics are considered: Undetermined coefficients, binomial theorem for negative and fractional exponents, logarithms, permutations and combinations, probability, elementary treatment of determinants, and theory of equations, with special reference to the solution of numerical equations of the third and fourth degrees.

First term, four hours.

Trigonometry.—Plane and spherical with applications to surveying and astronomy.

Second term, four hours.

COURSE II.—Analytic Geometry. The straight line, conic sections, general equation of second degree, and an introduction to geometry of three dimensions.

Calculus.—The differentiation and integration of functions with the usual applications.

Throughout the year, four hours.

COURSE III.—Differential Equations. For students in engineering, mathematics, and astronomy. This course includes ordinary and partial differential equations with a few geometrical and mechanical applications. Murray's differential equations is used as a text.

Throughout the year, two hours.

Given in 1907-8.

COURSE IV.—Projective Geometry. Lectures, supplemented by reading. Reference books: Reye, Geometrie der Lage; Scott, Modern Geometry; Cremona, Projective Geometry.

Throughout the year, three hours.

Given in 1907-8.

COURSE V.—Functions of a Complex Variable. A general introduction to the theory of functions of a complex variable, following the methods of Weierstrass and Riemann.

Throughout the year, two hours.

Given in 1906-7.

COURSE VI.—Higher Plane Curves. The general properties of curves, the resolution of singularities, and forms of curves of the third and fourth orders. Open to those who have completed Course IV.

Throughout the year, three hours.

Given in 1906-7.

Philosophy.

The aim of this department is to acquaint the student with the chief philosophic theories of the past and present, to cultivate in him the habit of critical and independent thought, and to set forth a consistent and satisfactory method of dealing with the fundamental problems of speculation.

COURSE I.—Psychology. A general introduction to the subject. A text-book is used, which is supplemented by informal lectures, assigned readings, and papers on special topics.

First term, three hours.

COURSE II.—Ethics. A brief survey of the history of ethical thought is followed by an examination of the chief ethical systems of modern times, with a view of arriving at the really valid principles which underlie human conduct. These principles are then applied to the various institutions and natural relations of human life. A text-book is used, supplemented by informal lectures.

Second term, three hours.

COURSE III.—History of Philosophy. A study of the chief philosophers and philosophic systems of ancient and modern times. Weber's History of Philosophy is used as a text-book. Open to all who have taken or are taking Course I.

First term, two hours.

Given in 1906-7.

COURSE IV.—Philosophy of Religion. The true basis of knowledge is inquired into, the traditional arguments for the existence of God are critically examined and the attempt is made to show that the theistic conception of the world is a necessary postulate of reason and of human life as a whole. Open to all who have taken Courses I. and III.

Second term, two hours.

Given in 1906-7.

COURSE V.—Theory of Thought and Knowledge. This course is made up of an inquiry into the general nature and conditions of thought, a review and criticism of the traditional logic, a study of proof and the most important logical fallacies, and a critical examination of philosophic scepticism, of realism, and idealism, and of apriorism and empiricism. Open to all who have taken or are taking Course I.

First term, three hours.

Given in 1907-8.

COURSE VI.—Metaphysics. This applies the conclusions reached in the preceeding course to the questions relating to reality.

Our chief metaphysical ideas are examined and an attempt is made to fix their meaning. These results are then applied to the construction of a consistent and valid theory of the nature of the material world and of the human soul. Open to all who have taken Courses I. and V.

Second term, three hours.

Given in 1907-8.

Physics.

This department comprises courses in theoretical and practical physics and mathematical physics.

The aim of the instruction in theoretical and practical physics is to give the student a thorough knowledge of the principles and laws that govern physical phenomena, and to acquaint him with the actual operations of these principles and laws. The work is presented to the student by lectures, replete with demonstrations and illustrations of the laws of physical phenomena, combined with recitations, and the solution of problems. In the practical work, the student performs such experiments in the laboratory as will give him a practical knowledge of the principles and laws of physics.

The first two courses are elementary and are intended primarily for general culture. The advanced courses are designed for those more especially interested in science, those who expect to teach the subject, or those who are planning to pursue engineering.

The courses in mathematical physics are designed for civil engineers and those anticipating electrical or mechanical engineering. They will be found of profit also to any taking an interest in applied or theoretical mathematical physics.

COURSE I.—General Physics. Mechanics, Sound, Heat, Light, Electricity, and Magnetism. A general course in which the laws, theorems, and phenomena of physics are carefully developed and presented. Lectures, experimental demonstrations, and recitations. Open to those who have completed Mathematics I.

Throughout the year, four hours.

COURSE II.—Experimental Physics. Laboratory work in mechanics. The student is required to determine the physical constants and to demonstrate the laws of mechanics.

Throughout the year, two hours.

COURSE III.—Advanced Physics. The advanced and most recent theories of sound, heat, light, and electricity. Lectures and recitations. Open to those who have completed Courses I. and II.

Throughout the year, three hours.

COURSE IV.—Teachers' Course. A course designed for those who expect to teach Physics. Lectures and demonstrations. Especial attention will be given to a review of the fundamentals of Physics, and to the best methods of presenting them to pupils. Each student will be required to present at least one subject before the class, and to design and construct one or more pieces of apparatus for laboratory or demonstration purposes. Open to those who have completed Courses I. and II.

First term, two hours.

Mathematical Physics.

COURSE I.—Elementary Analytic Mechanics, Statics, Kinematics, and Kinetics. Special attention is given to the application of mechanics to engineering problems. Special problems in applied mechanics will be taken up by the student in the laboratory during the second term. Open to those who have completed Mathematics I. and II., and Physics I. and II.

Throughout the year, two hours.

COURSE II.—Hydrodynamics and Hydraulics. A study of fluids at rest and in motion. Deduction of the laws and their application to practical problems. Lectures and recitations. Open to those who have completed Mathematics I. and II., and Physics I. and II.

First term, three hours.

COURSE III.—Mathematical Theory of Electricity. Lectures and recitations. Open to those who have completed Mathematics I. and II., and Physics I. and II.

Second term, three hours.

Political Science.

This department is open to those who have completed one year's work in History. Political theories and principles, ancient, mediaeval, and modern, are examined, as illustrated in the rise and fall of nations, and in the evolution of constitutions. In addition to the cultural worth of these investigations, it is the purpose to train for intelligent, responsible citizenship in the nation and community.

COURSE I.—Comparative Politics. This course is historical as well as comparative in method. It begins with a study of the state, its origin, development, forms, and ends, and an examination into the governments of ancient Greece and Rome and of mediaeval times. Then follows a study of the development and a comparison of the present constitutions of England, France, and Germany. The work is based on Wilson's The State, Burgess' Political Science, and Goodnow's Comparative Constitutional Law.

First term, two hours.

COURSE II.—American Administration. This is a comprehensive study of national, local, and municipal government in the United States. Constitutional Law is examined, the sources of the national constitution being traced and the development of its chief powers analyzed. The practical working of the administration in central and local control is then

studied and particular attention given to the conditions and the rule of cities. The work is based on Cooley's Constitutional Law, Bryce's American Commonwealth, and Wilcox's American City.

Second term, two hours.

Public Speaking.

The courses in public speaking are designed to train the student in the composition and delivery of the various forms of public address. So far as possible, the work is adjusted to the particular needs of the individual student.

COURSE I.—Interpretation of short extracts from great public speeches. Study and application of the laws underlying gesture and correct use of the voice. This course forms a part of English I., and as such is required of all students.

Throughout the year, one hour.

COURSE II. Argumentation. A course in debating. Study of the theory of debate. Lectures on methods of gathering and arranging material, kinds of proof, and methods of refutation. Illustrative readings from argumentative masterpieces. Brief-drawing. Extempore debate. Formal debate.

Elective for those who have completed Course I., and English II.

First term, two hours.

COURSE III.—The Oration, its general structure and style. Illustrative readings from oratorical masterpieces. Development of oratorical themes. Practice in the writing and delivery of formal orations.

Elective for those who have completed Course I., and English II.

Second term, two hours.

Spanish Language and Literature.

COURSE I.—Elementary Spanish. Spanish Grammar, Hills and Ford; Worman, First Spanish Book. Reading of such

easy Spanish as Ramsey's Spanish Reader; Alarcon, El Capitan Veneno. Open to Juniors and Seniors.

Throughout the year, three hours.

Given in 1906-7.

COURSE II.--A study of Modern Spanish nove's and dramas. Open to Juniors and Seniors.

Throughout the year, two hours.

Not given in 1906-7.

Physical Training.

For Young Men.—The object of this department is to give the student growth and increase of strength: to provide health and symmetrical development. These objects are acomplished by regular class exercises in the gymnasium during the fall and winter, on the field in the spring, and by periods of optional work after class hours. Physical measurements and strength tests of all students are taken upon entrance and at the close of the college course, and also at such other times as seem necessary. These form the basis of comparison of the students' condition and needs, and determine the character and amount of exercise necessary to overcome marked deficiencies, irregular development, or such deformities as are amenable to physical exercise.

Students will receive personal advice in reference to habits of life, exercise, study, and recreation, as well as suggestions pertaining to personal hygiene.

Regular exercise, consisting of Swedish work, military gymnastics, Indian club, wand, and dumb bell drills, principles of heavy gymnastics, is required of the men of the Sophomore and Freshman classes, three hours a week, from the middle of October to the middle

of May. Elective work is offered the Junior and Senior classes.

For Young Women.—The aim of the work is to acquire a symmetrical development of the body as a basis for health and grace. The training is based upon Delsarte Philosophy of Expression, and the Swedish and German systems of free movements and light gymnastics. All young women are required to take the prescribed work unless excused on recommendation of the instructor.

The general work includes Indian club and dumbbell exercises, flexing exercises to overcome stiffness, exercises to develop control of the muscles, and all devices in training that secure freedom of bodily action.

The Women's Gymnasium is equipped with the most modern apparatus. Opportunity is offered to do individual work under the direction of the instructor in addition to the regular class exercises. In the basement of Hulings Hall there is a bowling alley for the exclusive use of young women.

REQUIRED WORK

For graduation in any course all work specified as required must be completed, and in addition subjects selected from the general list of electives sufficient to make a total of not less than one hundred twenty term hours. "Term hour" signifies one hour recitation weekly for one term of eighteen weeks. The prescribed work in physical training must also be completed. In the senior year a thesis is required the first term and a thesis or an oration the second term.

Sixteen recitations weekly is the regular number, but the Registrar may assign seventeen. No student may take more than seventeen or less than twelve hours work without the approval of the Registration Committee. In no case will additional hours be allowed except on the basis of previous high grade work.

In the following tables Arabic numerals denote the number of hour recitations per week, i. e., the number of term hours. Roman numerals refer to the courses of instruction detailed on pages 35 to 67, where may be found full description of the character of the work.

Classical Course.

FRESHMAN YEAR.

	FIRST TERM	SECOND TERM
Latin I.	4	4
Greek I.	4	4
Mathematics I.	4	4
English I.	4	4

SOPHOMORE YEAR.

Latin II.	3	3
Greek II.	3	3
English II., III.	3	3
German I.	4	4
History I.	3	3

JUNIOR YEAR.

Philosophy I., II.	3	3
Elective [See Note]	11	11

SENIOR YEAR.

Elective	14	14

NOTE.—In the Classical Course, one year's work in Science is required. Choice may be made from Biology I., II., Chemistry I., II., Physics I.

Latin and Modern Language Course.

FRESHMAN YEAR.

	FIRST TERM	SECOND TERM
Latin I.	4	4
French I. [See Note I.]	4	4
Mathematics I.	4	4
English I.	4	4

SOPHOMORE YEAR.

Latin II.	3	3
French II. [See Note I.]	4	4
English II., III.	3	3
History I.	3	3
Elective [See Note II.]	3	3

JUNIOR YEAR.

Philosophy I., II.	3	3
Elective	11	11

SENIOR YEAR.

Elective	14	14

NOTE I.—Students that offer French instead of German for admission will take German I. and II. instead of French I. and II. as scheduled.

NOTE II.—In the Latin and Modern Language Course, one year's work in Science is required. Choice may be made from Biology I., II., Chemistry I., II., Physics I.

Latin-Scientific Course.

FRESHMAN YEAR.

	FIRST TERM	SECOND TERM
Latin I.	4	4
Biology I., II.	4	4
Mathematics I.	4	4
English I.	4	4

SOPHOMORE YEAR.

Chemistry I.	4	.
English II., III.	3	3
Physics I.	4	4
French I. [See Note I.]	4	4
Elective	.	4

JUNIOR YEAR.

History I.	3	3
Philosophy I., II.	3	3
Elective [See Note II.]	9	9

SENIOR YEAR.

Elective [See Note II.]	14	14

NOTE I.—Students that offer French instead of German for admission will take German I. instead of French I., as scheduled.

NOTE II.—In the Latin-Scientific Course nine term-hours' work in Science is required in addition to what is scheduled in the required work. Choice may be made from Biology III., (or IV.), Physics III., Chemistry II., III., Astronomy I., III., Geology I., II.

Scientific Course.

FRESHMAN YEAR.

	FIRST TERM	SECOND TERM
Biology I., II.	4	4
Mathematics I.	4	4
English I.	4	4
French I. [See Note I.]	4	4

SOPHOMORE YEAR.

Chemistry I., II., or Physics I.	4	4
English II.	3	.
French II. [See Note I.]	4	4
Mathematics II.	4	4
Elective	.	3

JUNIOR YEAR.

Physics I., or Chemistry I., II.	4	4
Geology I., II.	3	3
Astronomy I.	.	3
Elective [See Note II.]	8	5

SENIOR YEAR.

Philosophy I., II.	3	3
Elective [See Note II.]	11	11

NOTE I.—Students that offer French for admission, but not German, will take German I. and II. instead of French I. and II. as scheduled. If both French and German are offered for admission, an advanced course in one of these languages will be taken in the Freshman year and another course in the Sophomore year.

NOTE II.—Two of the following courses must be taken: Biology III. (or IV.), Chemistry III., Physics III.

Civil Engineering Course.

FRESHMAN YEAR.

	FIRST TERM	SECOND TERM
Mathematics I.	4	4
Graphics I., II.	4	4
English I.	4	4
French I. [See Note]	4	4

SOPHOMORE YEAR.

Mathematics II.	4	4
Graphics III.	3	3
Engineering, I.,	.	3
Physics I.,	4	4
Physics II.	2	2
English II.	3	.

JUNIOR YEAR.

Graphics IV., V.	3	3
Engineering II.,	3	.
Engineering III.,	3	3
Mathematical Physics I.	2	2
Chemistry I., II.	4	4
Astronomy I.	.	3

SENIOR YEAR.

Engineering IV.	4	4
Geology I.	3	.
Elective	6	9

NOTE.—Students that offer French for admission, but not German, will take German I. instead of French I. as scheduled. If both French and German are offered for admision, an advanced course in one of these languages will be taken in the Freshman year.

List of Electives.

The following list of elective studies includes all subjects that are elective in any of the courses of study. Some of the subjects are required in one or more of the courses of study, but are elective in others. The list is open to all students under the conditions named below.

1. The student must be fully prepared for the work.

2. He must avoid all conflicts in hours.

3. So far as possible all required work below his rank must be completed before advanced electives are chosen. This rule may be waived in cases where it is necessary in order that the student may be ready for a particular line of work in the latter part of his course.

4. A study once elected must be pursued to the end of the year or to the completion of the subject. No credit for graduation will be given for partial courses unless by arrangement made with the instructor and the Registrar before the study is begun.

5. The student's choice of elective work must exhibit a definite and coherent plan.

6. The faculty reserves the right to disapprove choice of electives.

The Arabic numerals refer to the number of hour recitations per week; the Roman numerals refer to the detailed description of the courses of instruction found on pages 35 to 67.

SUBJECTS.	FIRST TERM.	SECOND TERM.
Astronomy I	.	3
Astronomy II	.	1
Astronomy III	2	.
Biology I., II.	4	4
Biology III	3	3
Biology IV	3	3
Biology V., VI	4	4
Chemistry I., II	4	4
Chemistry III	3	3
Chemistry IV	3	3
Chemistry V	3	3
Chemistry VI	3	3
Economics I., II	3	3
Economics III., IV	2	2
Engineering I	.	3
English III	.	3
English IV	3	3
English V	3	3
English VI., VII	2	2
English VIII., IX,	2	2
English Bible II	2	2
English Bible III	3	3
French I	4	4
French II	4	4
French III	3	3
French IV	3	3
French V	3	3
French VI., VII	2	2
Geology I., II	3	3

SUBJECTS.	FIRST TERM.	SECOND TERM.
German II	4	4
German III	3	3
German IV	2	2
German V	1	1
German VI	2	2
Greek III	3	3
Greek IVA	2	2
Greek IVB	2	2
Greek V	2	2
Greek VI	4	4
Greek VII	2	2
Hebrew	4	4
History I	3	3
History II	3	3
History III	3	3
History IV	2	2
History V	2	2
Italian I	3	3
Italian II	2	2
Latin II	3	3
Latin III	3	3
Latin IV	4	4
Latin V	2	2
Latin VI	2	2
Latin VII	2	2
Mathematics II	4	4
Mathematics III	2	2
Mathematics IV	3	3
Mathematics V	2	2
Mathematics VI	3	3

	FIRST TERM.	SECOND TERM.
Philosophy I., II	3	3
Philosophy III., IV	2	2
Philosophy V., VI	3	3
Physics I.	4	4
Physics II.	2	2
Physics III.	3	3
Physics IV.	2	.
Mathematical Physics I.	2	2
Mathematical Physics II., III.	3	3
Political Science I., II	2	2
Public Speaking II., III.	2	2
Spanish I.	3	3
Spanish II.	2	2

GENERAL INFORMATION.

College Fees.

All students pay a fee of $60 a year, one half payable at the opening of each term. This includes incidental, library, and gymnasium fees.

Students in the Civil Engineering Course and those who elect any of the technical subjects of that course pay an additional fee of $7.50 a term.

In the Laboratories the following fees are charged each term:

Biology I., II.	$ 2.00
Biology III., IV.	4.00
Biology V., VI.	5.00
Chemistry I.	4.00
Chemistry II.	4.00
Chemistry III., IV.	7.50
Chemistry V.	2.50
Chemistry VI.	10.00
Geology II.	2.00
Physics II.	4.00
Mathematical Physics I.	2.00

In addition breakage of material furnished is charged at actual cost.

All college fees are due on the day of registration.

No student is admitted to class until all fees are paid or satisfactorily arranged for.

Living Expenses of Young Men.

The young men of the College board in clubs or in private families, the latter costing about one-third more than the former. The cost of good table board is in this way reduced to from $2.25 to $3.00 a week. If

the student has a room-mate, the necessary expenses for a year will fall within the following estimates:

	LOW.	LIBERAL.
Term fee	$ 60.00	$ 60.00
Room rent, fuel, light	27.00	45.00
Table board	80.00	108.00
Books	10.00	20.00
Total	$177.00	$233.00

To be added to these figures are laboratory fees, if the student pursues studies in which such charges are made. Students in the Civil Engineering Course pay an additional fee of $15 a year. The cost of books will vary greatly from term to term, but a fair average will fall within the limits given.

Expenses other than those enumerated depend largely on the student's tastes and habits, and the College does not undertake to estimate them. For the items mentioned the figures given are exact. Few students will have occasion for spending more than $250 a year. This, of course, does not include traveling expenses, clothing, or luxuries. An economical student can live on $200 a year; indeed not a few students spend less than this and yet live comfortably.

Young Women.

Allegheny College is a co-educational institution. It endeavors to give young women the highest educational advantages open to young men. Instruction is given in the same subjects and by the same professors, and young women have access to all departments of the college, and are eligible to all honors.

Hulings Hall. Young women not living at home or with relatives are required to live in Hulings Hall.

The constant aim is to furnish here an ideal college home for young women, where they shall be surrounded with influences which promote true and cultured womanhood. The Hall is under the charge of the Dean of Women, whose influence, with that of her competent assistants, is constantly felt in the social, moral, and religious development of the young women under her care.

For the proper maintenance of the Hall as a college home for young women certain specific rules are essential, but it is the policy of the college to make only such regulations as will best protect the interests of those who reside there. As large a measure of self government as possible is accorded and the young women of the upper classes assume a certain amount of responsibility for the management of the Hall. All proper freedom is accorded, but applicants for admission are reminded that the purpose of residence in Hulings Hall is not primarily social but educational, and the authorities in charge reserve the right to determine what best promotes the educational welfare of the residents in the Hall. A copy of the regulations for the government of the Hall will be sent on request.

The rooms are furnished with beds, mattresses, pillows, chairs, and tables. Each resident supplies the following articles: Sheets, pillow cases, and bed covering, towels, napkins, and individual table silver. The rates for a term, including heat and light, are as follows:

Main corridor, second and third floors.....$50.00
Rear corridor, second and third floors..... 40.00

When two persons occupy a room the rate for each is one-half the above amount. Room rent is payable

at the opening of each term. Rooms may be reserved in advance by the payment of a deposit of half the rate for the term. Seniors are allowed first choice of rooms. Table board is $55 a term. The total expense for board, room, heat, and light for the year, where two occupy a room, is $160 for those in the front corridor and $150 for those in the rear corridor.

Aid to Students.

Self-Help.—Young men help themselves in several ways. A considerable number of the present students are earning their expenses in whole or in part. Some are employed in light work connected with the College or the boarding clubs. Some find in town opportunities for work of various kinds. A few are serving churches in the neighborhood of Meadville. It is the policy of the College to help students that help themselves.

The Lindley Endowment.—By the will of the late Miss Lucy Lindley, of Meadville, the College received the sum of ten thousand dollars, the interest of which is used to assist students dependent upon their own efforts to obtain an education. Application for aid from this fund should be made to the President. It should be remembered, however, that only a limited number of students can be aided in this way.

The Ballantyne Scholarship Fund.—Mrs. Hettie F. Ballantyne, of Pittsburg, gave to the College thirty thousand dollars in memory of her late husband. The fund is known as the James Alexander Ballantyne Scholarship Fund. The income is used to pay the college term fees, and in cases of need, certain other expenses, of the sons and

daughters of ministers of the Pittsburg Conference, and of young men from the territory of that conference who are studying for the ministry. This fund is administered by the officers of the College Faculty on recommendation of a committee of the Conference. Application should be made to Rev. C. W. Smith, D. D., Pittsburg, Pa.

High School Scholarships.—The Board of Trustees has established thirty prize scholarships of fifty dollars each, to be awarded each year to honor students in thirty of the best high schools in the patronizing territory of the college. In case the graduating class numbers ten or less, the scholarship must go to the one having maintained the highest scholastic rank during his high school course. If the class numbers more than ten, and less than twenty-five, it may go to the first or second in rank, and if there are over twenty-five in the class the scholarship may go to any one of the three highest. The amount of the scholarship is to be applied on the fees of the freshman year.

Educational Society Loans.—Students who are members of the Methodist Church, showing promise of usefulness in any form of Christian activity, may secure loans from the Educational Society. These loans are without interest and need not be paid in full until five years after graduation. These loans are offered not only to candidates for the ministry, but also to all needy and worthy students who show promise of useful service in lines of Christian activity and are endorsed by their home Quarterly Conference. The loans are made by the Society on the recommendation of the Faculty.

No aid from the above mentioned funds, or from any other source, is given to students who use tobacco.

A student having received aid from any of the College funds will be given a letter of dismissal to enter another college only after all such aid shall have been returned.

Religious Culture.

The College was founded by Christian men for the promotion of Christian culture. It believes that education should always include, as its highest aim, the development of Christian character. It seeks to make the moral and religious life of the college community such that the student will be under as helpful influences as he would be in his own Christian home.

Chapel services are held each morning and all students are required to be present. Regular attendance on Sunday mornings at some church, selected by the student or his parents, is also required. Prayer meetings are held Wednesday evening of each week. The results are manifest in the quickening and strengthening of many in the religious life. Religious services, under the care of the Young Men's Christian Association of the College, are held on Monday evening of each week in its hall. On Sunday evening the Young Women's Christian Association holds its regular meeting in the parlor of Hulings Hall. The students' Christian Associations also conduct religious services weekly in several places in the city and surrounding region.

The religious influence of the College is not in any sense sectarian, but Christian. On the rolls this year are representatives from nineteen Christian denominations.

The Adviser System.

Each student on registering is assigned to some member of the Faculty, who serves throughout the year as a special counsellor on all matters in which the student finds the need of frank and friendly advice. The relation between adviser and student is intended to be perfectly fraternal, without restraint on either side.

Literary Societies.

There are three literary societies: The Allegheny and the Philo-Franklin for young men, and the Ossoli for young women. The societies have their respective halls, with libraries aggregating about 2,500 volumes. These literary societies render the College efficient service in the literary, forensic, and parliamentary training of students, and the society friendships are invaluable to the members. Every student is earnestly advised to avail himself of the obvious advantages of a society. The societies have prize contests every year in oration and essay. At commencement time there is held an inter-society contest.

Clubs.

The Classical Club, composed of the instructors in the classical departments and about twenty-five advanced students, meets for the review of new books and current literature, and for the reading and free discussion of papers submitted by members on lines of classical investigation. The room of the club is on the second floor of the library.

The Quill Club represents the journalistic and literary interests of the College. Its aim is to encourage press correspondents; to co-operate intelligently with

the editors of the college publications and foster original and creative literary effort. It meets monthly. The membership is limited to thirty.

The Scientific Club meets weekly to discuss abstracts of current scientific papers or to listen to the presentation of original research of some of the members. The club includes members of the faculty and students in the college who are interested in scientific work.

The German Club is an organization of students under the leadership of the professor of German that meets fortnightly for the purpose of arousing and sustaining interest in the German language as a vehicle of oral expression and of studying German life, institutions, and politics. Membership is open to all students who have had one or more years of regular class-room work in German.

Prizes.

In addition to essay and oration prizes offered by the literary societies, two prizes are open to competition by students of the College classes.

The Wakefield Oration Prize.—Mr. James A. Wakefield, of Pittsburg, furnishes a prize of fifty dollars, in the name of his grandfather, Rev. Samuel Wakefield, D. D., awarded in April of each year, to the young man delivering the best oration. The winner of this prize represents the College in the Tri-State Oratorical League Contest held in May.

Class of Ninety Oration Prize.—The class of '90, which numbered forty-two persons, has established a prize of forty-two dollars to be awarded annually to

the young man or woman delivering the best oration at a contest held in May of each year.

Heckel Prizes in Biology.—Two prizes, a first prize of thirty-five dollars and a second prize of fifteen dollars, are given each year by Dr. Edward B. Heckel, of Pittsburg. These prizes are awarded for the best two theses written by graduate or undergraduate students upon biological subjects. The theses are presented on the first day of May and the prizes awarded the following Commencement Day.

Athletics.

Outdoor exercise and athletic sports under the direction of competent supervisors are fostered as helpful in complete physical training, but are made consistently secondary to scholastic work. No student may take part in athletic events without the consent of the physical director after a physical examination. The athletic interests of the college are in the hands of the Athletic Association, to which all members of the College are eligible, and the business is managed and all funds administered by an Athletic Advisory Board, composed of four members of the faculty and four students. All details of athletic contests must receive the sanction of the Athletic Board, and every precaution is taken to insure clean athletics. Players must be bona fide students taking not less than twelve hours work, must have been registered at the opening of the year in which they compete, may not have more than one condition in any preceding work or be delinquent in the current term's work, and may not receive remuneration, directly or indirectly, for their services. Competent coaches are provided in foot ball and base ball.

Degrees.

The degree of Bachelor of Arts is conferred upon those who complete in a satisfactory manner the Classical, the Latin-Scientific, or the Latin and Modern Language Course.

The degree of Bachelor of Science is conferred upon those who complete in a satisfactory manner the Scientific or the Civil Engineering Course.

Bachelors of Arts of this College, or of another of equal rank, may pursue, in residence, work in not more than two distinct lines of study. On the completion of a full year's work, including a satisfactory thesis, the degree of Master of Arts is conferred. Bachelors of Arts of this College may, by vote of the Faculty, be permitted to pursue this work in non-residence, but in that case at least two years must be devoted to it. A student who has completed at the end of the first term of the Senior year all requirements for the degree of Bachelor of Arts, may pursue work in residence which shall count toward the degree of Master of Arts. Such a student may complete in non-residence the remainder of his work for the Master's degree and receive the degree one year after receiving the Bachelor's degree.

The degree of Master of Science is conferred upon Bachelors of Science on the same conditions as the degree of Master of Arts is conferred upon Bachelors of Arts.

Every person receiving a degree from the College pays a fee of five dollars for diploma.

REGISTER OF STUDENTS.

Classification.

The classification of the Catalogue is made in February of the college year, and gives the class rank for the year.

In the Senior class are included those who have completed by February 1, not less than one hundred four term-hours, of the one hundred twenty necessary for graduation.

In the Junior class are included those who have completed by February 1, not less than seventy term-hours.

In the Sophomore class are included those who have completed by February 1, not less than thirty-six term-hours.

In the Freshman class are included all who have been admitted to the class during the year.

The small capitals following the names indicate the course of study: C standing for Classical,, LS for Latin-Scientific, L for Latin and Modern Language, S for Scientific, and E for Civil Engineering.

Graduate Student

Candidate for the Degree of Master of Arts.

Van Riper, Benjamin Whitman.....Meadville
Chemistry and Philosophy.

DEGREES CONFERRED JUNE 21, 1905.

Doctor of Laws.

William F. Oldham.

Doctor of Divinity.

Abram S. Kavanagh.
Samuel Simpson Marquis.

Master of Arts.

Theron Frank Tabor.

Bachelor of Arts.

Mabel Blanche Appleby.
Frank Elmer Baker.
James Van Horne Ballantyne.
Levi Orton Davenport.
Katherine Deniston Dewey.
Cecil Kay Edmonds.
Cinnett Grant Farr.
Anna Jeannette Harrison.
Wilber Jay Hewit.
Ira David Hyskell.
Lettie Love Johnston.
Caude Hurst King.
Clara Belle Leet.
Walter Davis Lewis.
Frank Mellon McArthur.
Margaret McLaughlin.
Charles Coburn Merrill.
Paul Mitchell.
Joseph Emil Morrison.
Fred Combs Reynolds.
Edith Rowley.
George Henry Rowley.
Clifford John Scott.
Herbert Moore Scott.
Roy William Scouten.
Harry E. Stone.
Benjamin Whitman Van Riper.
Clarence Allan Van Slyke.
Harley John Wood.
Bruce Simpson Wright.

Bachelor of Science.

Clifford Cowles.
Frank Raymond Frost.
James Herman Hassler.
Frank H. Larder.
Charles Andrew McIntier.
Frank Max Ohlman.
Wesley Akers Wynn.

PHI BETA KAPPA.

ETA CHAPTER OF PENNSYLVANIA.

Chartered Setember 12, 1901.

OFFICERS.

President.

President William H. Crawford.

Secretary.

Professor William A. Elliott.

MEMBERS INITIATED IN JUNE, 1905.

From the Senior Class.

Frank Elmer Baker
Anna Jeannette Harrison
Ira David Hyskell
Benjamin Whitman Van Riper.

From the Alumni.

Prof. Ephraim Miller, A. M., '55.
Rev. N. Hutton Axtell, D. D., '60.
William J. Armstrong, M. D., '81.
Judge Simpson S. Ford, '81.
Rev. Samuel S. Marquis, D. D., '90.

Rev. William F. Anderson.

Annual Address, June 15, 1905.

Rev. William F. Anderson, D. D.

Subject, The Motive of Culture.

Addresses and Lectures for the Year 1905-6.

Bishop Henry W. Spellmeyer, D.D., Cincinnati.

June 18.—Sermon before the Christian Associations.

Rev. William F. Anderson, D.D., New York.

June 20.—Annual Address before the Phi Beta Kappa Society.

Bishop Luther B. Wilson, D.D., Chattanooga.

Modern Forward Movements and Reforms.

Oct. 10.—I. The Problem of the Saloon.

John Quincy Adams, Ph.D., Chicago.

The Relation of Art to Citizenship.

Oct. 26.—1. What is Art?

28.—2. The Development of Art.

30.—3. Municipal Art.

31.—4. Art and Citizenship.

Professor Charles DeGarmo, Ph.D., Cornell University.

Careers for College Men.

Nov. 17.—III. Teaching as a Career.

Rev. James M. Thoburn, Jr., D.D., Allegheny.

Jan. 31.—Sermon on the Day of Prayer for Colleges.

Dr. David D. Thompson, Chicago.

Modern Forward Movements and Reforms.

Feb. 21.—II. The Problem of Labor.

John W. Perrin, Ph.D., Cleveland.

March 7.—1. The Louisiana Purchase and Its Antecendents.

8.—2. Benjamin Franklin as a Man of Letters.

Allegheny College Preparatory School.

This school is under the direct control and supervision of the college authorities, but has its own building and a distinct corps of instructors.

It aims to prepare students for college with a minimum expenditure of time. It is realized that many students looking forward to a college course are precluded by age or by lack of early advantages from taking a regular four years' course in academy or in high school. Young men and women of maturity can by thorough application fit themselves for college in less time than is necessary for younger and less mature persons. Earnest and capable younger pupils may also in some cases gain time in fitting for college. The work is systematic and thorough and every effort is made to enable the student to work to the best advantage. Under certain limitations students may take a part of their work in college classes. Students registered in the college also who are deficient in certain subjects can pursue these studies under skilled instruction and with every facility for accurate and thorough work.

A fine new building containing in addition to class rooms, an assembly room, society rooms, a chemical laboratory, and a gymnasium, is used by the school.

All instruction is given by college graduates, teachers of thorough preparation and successful experience.

Full particulars, including lists of the instructors and students, are found in the catalogue of the school, a copy of which will be sent on request to the Principal, Frederick S. Breed, A. M.

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THE COLLEGE BULLETIN

SERIES VI., No. 1
FEBRUARY, 1907.

CATALOGUE
1906-1907

ALLEGHENY COLLEGE

FOUNDED IN 1815

NINETY-SECOND YEAR

CATALOGUE

OF

ALLEGHENY COLLEGE

FOR

1906-1907

MEADVILLE, PA.
1907

THE ALLEGHENY COLLEGE BULLETIN

PUBLISHED QUARTERLY
BY THE COLLEGE.

SERIES VI., No. 1
FEBRUARY, 1907.

Entered as second-class matter in the postoffice at Meadville, Pa.

CATALOGUE FOR THE ACADEMIC YEAR 1906-7,

AND ANNOUNCEMENTS OF COURSES FOR 1907-8.

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1907

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Heavy faced type indicates the dates named in the College Calendar on the two pages following.

CALENDAR.

1907.

April 10, Wednesday—Last day for presenting Senior Orations and Theses.

May 10, Friday—Choice of Senior Speakers.

30, Thursday—Memorial Day, a holiday.

June 7, 8, 10, 11—Senior Examinations.

10, 11, 12, 13, 14, 15—Second Term Examinations.

16, Sunday, 10:45 a. m.—Baccalaureate Sermon by President William H. Crawford.

7:45 p. m.—Annual Sermon before the Christian Associations by Rev. James M. Buckley, D. D.

17, 18, Monday and Tuesday—Entrance Examinations.

17, Monday, 7:30 p. m.—Commencement Exercises of the Preparatory School.

18, Tuesday, 2:00 p. m.—Class Day Exercises.

3:00 p. m.—Annual Meeting of the Board of Control.

4:00 p. m.—Annual Meeting of the Phi Beta Kappa Society.

7:30 p. m.—Phi Beta Kappa Address, by Professor Paul Shorey.

9:00 p. m.—Reception by President and Mrs. Crawford.

19, Wednesday, 9:00 a. m.—Annual Meeting of the Board of Trustees.

1:00 p.m.—Meeting of the Alumni Association. Annual Dinner.

7:30 p. m.—Commencement Concert.

9:00 p. m.—Fraternity Banquets.

20, Thursday, 9:30 a. m.—Commencement Exercises.

SUMMER VACATION.

1907.

Sept. 17, Tuesday—First Term Begins.
16, 17, Monday and Tuesday—Entrance Examinations.
17, Tuesday—Registration of New Students.
18, Wednesday—Registration of Old Students.
19, Thursday, 8:00 a. m.—Recitations Begin.
Nov. 6, Wednesday—Last Day for Submitting Subjects of Senior Orations and Theses.
28, Thursday—Thanksgiving Day, a holiday.
Dec. 6, Friday, Class of Ninety Oration Contest.
20, Friday, 12:30 p. m.—Recitations Close.

CHRISTMAS RECESS.

1908.

Jan. 8, Wednesday, 8:00 a. m.—Recitations resumed.
15, Wednesday—Last Day for Presenting Senior Theses.
16, Thursday—Day of Prayer for Colleges.
Jan. 24-31—First Term Examinations.
Jan. 31, Friday, 4:00 p. m.—First Term Ends.

Feb. 4, Tuesday—Second Term Begins. Registration.
5, Wednesday, 8:00 a. m.—Recitations Begin.
12, Wednesday—Wakefield Oration Contest.
22, Saturday—Washington's Birthday, a holiday. The College Dinner.
March 4, Wednesday—Last Day for Submitting Subjects of Senior Orations and Theses.
27, Friday, 4:00 p. m.—Recitations Close.

SPRING RECESS.

April 7, Tuesday, 8:00 a. m.—Recitations Resumed.
29, Wednesday—Last Day for Presenting Senior Orations and Theses.
May 11, Monday—Choice of Senior Speakers.
30, Saturday—Memorial Day, a holiday.

June 18, Thursday—Commencement.

BOARD OF TRUSTEES.

Ex-Officio.

HIS EXCELLENCY EDWIN S. STUART,
Governor of the Commonwealth.

HON. JAMES T. MITCHELL,
Chief Justice of the Supreme Court.

HON. HAMPTON L. CARSON,
Attorney General.

SAMUEL B. DICK,	Meadville
HARVEY HENDERSON,	Allegheny
WILLIAM THOMAS,	Meadville
JOHN J. HENDERSON, LL.D.,	Meadville
GEORGE W. HASKINS,*	Meadville
THEODORE L. FLOOD, D.D., LL.D.,	Meadville
JONATHAN HAMNETT, D.D.,	Meadville
JOHN A. WOOD,	Pittsburg
WILLIAM S. FOLTZ,	New Castle
JAMES W. LEE,	Pittsburg
REV. JAMES R. MILLS, D.D.,	Cleveland, O.
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JAMES W. KINNEAR,	Pittsburg
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REV. JAMES M. BRAY, A.M.,	Westfield, N.Y.
REV. WILLIAM H. CRAWFORD, D.D., LL.D.,	Meadville

*Deceased.

JOHN E. RIGG, M.D., . . . Wilkinsburg
DURBIN HORNE, ... Pittsburg
EDWARD APPLEYARD, . . Jamestown, N.Y.
ROBERT B. MURRAY, . . . Youngstown, O.
WESLEY B. BEST, ... Meadville
REV. RUSSELL F. KEELER, D.D., . Middlefield, O.
REV. THOMAS N. BOYLE, D.D., . . Crafton
JESSE C. MCDOWELL, ... Pittsburg
WILLIAM S. SMITH, ... Meadville
JOHN V. RITTS, ... Butler
CHARLES MILLER, ... Franklin
JOHN S. CRAIG, ... Allegheny
NORMAN T. ARNOLD,* . . . . . Ridgway
NOAH F. CLARK, ... Oil City
EDWARD H. UTLEY, ... Pittsburg
HARRY G. SAMPSON, ... Pittsburg
AUSTIN BLAKESLEE, ... Du Bois
REV. NOBLE G. MILLER, D.D., . . Blairsville
TRUMAN D. COLLINS, ... Nebraska
A. M. SCHOYER, ... Pittsburg
NELSON A. RIST, ... Dawson
JOHN J. CARTER, ... Titusville
HARLEY BARNES, ... Painesville, O.
REV. J. C. MCDONALD, . . . New Castle

*Deceased.

Officers of the Board.

DURBIN HORNE, ... President
JOHN J. HENDERSON, ... Vice-President
WILLIAM S. SMITH, . . Secretary and Treasurer

Executive Committee.

WILLIAM H. CRAWFORD, . . . Chairman
WILLIAM S. SMITH, ... Secretary
WILLIAM THOMAS. JOHN J. HENDERSON.
THEODORE L. FLOOD.

CONFERENCE BOARD.

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W. S. HORNER.
REV. R. F. RANDOLPH, D.D.
W. D. HINCKLEY.
REV. CHARLES H. STOCKING, D.D.
REED P. CLARK.
REV. M. F. COMPTON, D.D.
H. F. JONES.
REV. J. F. MURRAY, Ph.D.
W. J. GUTHRIE.
REV. J. R. RANKIN, D.D.
E. D. SMITH.
REV. ROBERT M. FRESHWATER, D.D.
JOHN O. PEW.
REV. J. S. ROBINSON.
EDWARD S. HAZLETT.

CENTENARY BOARDS.

Pittsburg Conference.

Rev. Charles W. Smith, D.D., LL.D., . President
Rev. Joseph Horner, D.D., LL.D., . Secretary
Joseph H. Holmes, ... Treasurer

Albert A. Horne.	Harvey Henderson.
A. C. Knox.	W. A. Carr.

Erie Conference.

Rev. R. S. Borland, D.D., . . . President
Rev. J. W. Blaisdell, D.D., . . Vice-President
Rev. T. W. Douglass, D.D., . . . Secretary
William S. Smith, ... Treasurer

Rev. H. G. Dodds, D.D.	W. W. Gelvin.
Rev. L. H. Bugbee, D.D.	William Thomas.
Rev. W. H. Crawford, D.D., LL.D.	Rev. R. A. Buzza.
Rev. J. R. Rich.	B. L. Singley.

FACULTY.

WILLIAM H. CRAWFORD, D.D., LL.D.,
PRESIDENT,
Professor of Ethics.

JONATHAN HAMNETT, D.D.,*
Librarian, Emeritus Professor of Philosophy.

WILLIAM T. DUTTON, C.E.,
Francis Asbury Arter Professor of Mathematics and Civil Engineering.

WILLIAM A. ELLIOTT, A.M., L.H.D.,
Professor of Greek Language and Literature.
REGISTRAR.

ERNEST ASHTON SMITH, PH.D.,†
Alumni Professor of History and Economics.

CLARENCE F. ROSS, A.M.,
Bradley Professor of Latin Language and Literature.
SECRETARY.

FRANK C. LOCKWOOD, PH.D.,
Eliza Kingsley Arter Professor of English Language and Literature.

*Resigned July 1, 1906, to accept retiring allowance from the Carnegie Foundation.
†Absent on leave, Sabbatic year.

ROBERT S. BREED, PH.D.,
Professor of Biology and Geology.

GEORGE A. MULFINGER, PH.D.,
Professor of German Language and Literature.

H. EDWARD WELLS, PH.D.,
Professor of Chemistry.

MARGARET E. N. FRASER, PH.D.,
Professor of Romance Languages.

CAMDEN M. COBERN, PH.D., D.D.,
James M. Thoburn Professor of English Bible and Philosophy of Religion.

CHARLES J. LING, PH.D.,
Professor of Physics and Astronomy.

HENRY McGILBERT WAGSTAFF, PH.D.,
Acting Professor of History and Economics.

LEMUEL R. BROWN, A.M.,
Assistant Professor of English.

OSCAR P. AKERS, PH.D.,
Assistant Professor of Mathematics.

GUY M. SNAVELY, A.M.,
Instructor in French and Latin.

J. HARRIS WERNER, B.S.,
Physical Director.

ALICE HUNTINGTON SPALDING,
Instructor in Expression and Physical Training.

EDITH ROWLEY, A.B.,
Assistant Librarian.

EMMA M. EDSON, A.B.,
Assistant in Biology.

COMMITTEES OF THE FACULTY.

Registration.

THE PRESIDENT — THE REGISTRAR
PROFESSOR LOCKWOOD — PROFESSOR MULFINGER
PROFESSOR COBERN

Courses of Study.

PROFESSOR DUTTON — PROFESSOR ELLIOTT
PROFESSOR BREED — PROFESSOR COBERN
PROFESSOR FRASER

Discipline.

THE PRESIDENT — PROFESSOR DUTTON
PROFESSOR ELLIOTT

Chapel Services.

PRESIDENT CRAWFORD — PROFESSOR ELLIOTT

College Organizations.

PROFESSOR LOCKWOOD — PROFESSOR WELLS
PROFESSOR AKERS

Library.

PROFESSOR ROSS — PROFESSOR MULFINGER
PROFESSOR WAGSTAFF

Graduate Instruction.

PROFESSOR LOCKWOOD — PROFESSOR BREED

Athletics and Gymnasium.

PROFESSOR WELLS — PROFESSOR ROSS
PROFESSOR BREED — MR. WERNER

Hulings Hall.

PRESIDENT CRAWFORD — PROFESSOR LOCKWOOD
PROFESSOR FRASER

Accredited Preparatory Schools.

THE PRESIDENT — PROFESSOR ROSS
PROFESSOR AKERS

College Book Store.

PROFESSOR BREED — PROFESSOR LING
PROFESSOR AKERS

Catalogue.

PROFESSOR ELLIOTT — PROFESSOR ROSS
PROFESSOR BROWN

DESCRIPTION OF THE COLLEGE.

Historical Sketch.

Allegheny College was founded in 1815 by citizens of Meadville, then a frontier village of some three or four hundred inhabitants. The first president was Rev. Timothy Alden, a Presbyterian minister. The institution was chartered in 1817, and in 1820 the corner stone of the first building, Bentley Hall, was laid. In 1831 Dr. Alden resigned, and in 1833 Rev. Martin Ruter was elected to the presidency, since which time the College has been under the general patronage of the Methodist Episcopal Church. It has always been understood, however, both by the trustees of the College, and by its patrons, that the institution is to be conducted as the charter requires, on liberal principles, no person having any advantage, or being subjected to any disadvantage, on account of his religious views.

Location.

Allegheny College is situated in Meadville, Pennsylvania, on the main line of the Erie, and Bessemer & Lake Erie railroads. An electric road gives direct connection with Erie and intervening points. Meadville has a population of more than eleven thousand. It is an old and well established town with attractive streets and residences, cultured society, and many educational influences. Being largely a residential town it has few of the disadvantages of city life. It has most of the advantages of a city, such as paved

streets, an effective sewerage system, an abundant supply of wholesome water from driven wells, arc and incandescent electric lights, illuminating and natural gas, and an electric street railroad connecting all parts of the town with the college grounds.

The surrounding country is remarkable for its beautiful and diversified scenery. Within a short radius are some twenty miles of ravines of wild and rugged beauty, and the foothills of the Alleghenies which suround the town make the situation one of great attractiveness. The neighborhood is especially rich in material for the study of Botany and Geology.

Buildings and Grounds.

The college campus contains sixteen acres on the north edge of the town, nearly a mile from the business section, at an elevation of two hundred feet above French Creek and twelve hundred feet above the sea. It is abundantly shaded by numerous varieties of trees, many of them planted by students nearly a century ago. The ravine which passes through the campus and the situation overlooking the town and the valley for miles below, give a natural beauty hardly surpassed. The grounds are well provided with granolithic walks, and both grounds and buildings are kept in an attractive and sanitary condition.

The heating plant, situated in the upper ravine, supplies steam heat to all the college buildings. It is entirely adequate to the needs of the College.

Bentley Hall bears the name of Rev. William Bentley, D. D., of Salem, Massachusetts, who gave his valuable library to the College. The corner stone was laid in 1820. It consists of a central three-story build-

ing with tower, and two wings with massive pillars. The building contains the administrative offices of the College and recitation and lecture rooms. The third floor is devoted to the halls of the literary societies with their libraries.

During the summer of 1905 extensive improvements were made in the interior of the building. New hard wood floors and oak wainscoting were put in, and new furniture throughout has been provided. These changes, made at a cost of about seven thousand dollars, have rendered the building very attractive and entirely modern without lessening its charm as a fine example of colonial architecture.

Ruter Hall, which bears the name of Rev. Martin Ruter, D. D., the second president of the College, is a substantial brick building, erected in 1855, chiefly by the citizens of Meadville. On the first floor is the geological museum of the College. On the second floor are recitation rooms, a drawing room, an instrument room, and an office, used by the departments of Mathematics and Civil Engineering. The third floor is occupied by the department of Biology. Two laboratories, an office, a store room, and a lecture room are in use.

Hulings Hall, a four-story brick building, ninety-four by one hundred forty feet, was erected in 1881, by Mr. Marcus Hulings, of Oil City, and citizens of Meadville. It is used as a home for young women, and accommodates about eighty. The building is well lighted and ventilated, is provided with fire escapes, and is in thoroughly good sanitary condition. It has recently been almost entirely refurnished. The rear wing of the building contains on the fourth floor

five large society halls; the first and second floors are occupied by the gymnasium for young women. The gymnasium has a clear floor space fifty-four by forty feet and is finished throughout in Georgia pine. It is provided with a full line of modern apparatus. In the basement are dressing rooms and baths.

Wilcox Hall of Science, named for Mr. and Mrs. Robertson Wilcox, of Girard, Pa., is a modern brick building built in 1892, for the departments of Physics and Chemistry. It contains an amphitheatre lecture room, seating one hundred twenty-five students, chemical and physical laboratories, and basement work shop. There are ten working rooms. In the construction of the building especial care was taken to provide abundant light.

The Gymnasium, erected in 1896, adjoins the athletic field. It is in the early Italian style of round arched architecture, and is constructed of native stone and brick. The building is T-shaped in form, the front portion being two stories high, exclusive of the tower. The first floor contains the director's room, locker rooms, and baths. On the second floor are the assembly and committee rooms of the Young Men's Christian Association. The gymnasium floor, which occupies the rear extension, has a clear space of forty-five by eighty feet unobstructed by pillars, the roof and running track being suspended from steel trusses. The building is equipped with the appointments of a first class modern gymnasium.

Newton Observatory, completed in 1901, was made possible by the gift of Mrs. Mary M. Newton, of Batavia, Illinois, in memory of her husband, Captain D.

C. Newton, once a student in the College. It is a rock-faced stone building of fine architectural appearance, containing in addition to the observing room, a transit room, a computing room, and the director's office.

Ford Memorial Chapel was erected in 1901-2 through the generosity of Captain John B. Ford, of Creighton, Pa., in memory of his wife. The cost of the building was $34,000. It is of rock-faced Cleveland sandstone, in Gothic Romanesque style, with a spacious auditorium seating four hundred fifty, besides a gallery seating one hundred fifty, and an oratory seating one hundred fifty. The rich stained glass windows and the harmonious interior appointments add much to the stateliness of the building.

The chapel is provided with a splendid pipe organ, the gift of the granddaughters of Captain Ford, Mrs. J. A. Ballantyne and Misses Nellie and Stella Ford, who contributed $6,000 for this purpose. The organ was designed by Mr. W. L. Mayer, of Pittsburg, and was built by the late Julius Neef, of Philadelphia. It has three manuals and 1,920 pipes, and is supplied with the best devices of great modern organs.

The Library Building, the gift of an anonymous donor, was completed in 1902 at a cost of over $40,000. Its dimensions are eighty-five by seventy-four feet. It is constructed of vitrified brick with terra cotta trimmings, in Italian-Renaissance style. In addition to the stack room with a capacity of sixty thousand volumes, it contains a cataloguing room, librarian's rooms, general reading room, and a large reference reading room. On the second floor are the faculty room and department seminar rooms. The interior

appointments of the library are entirely in accord with the artistic character of the building.

The Preparatory School, completed in February, 1906, is situated on land recently acquired northeast of the main campus. It is built of grey vitrified brick and terra cotta in English school style. It contains an office, seven recitation rooms, an assembly room, a gymnasium, a chemical laboratory, society rooms, and cloak rooms. The equipment throughout is new. The cost of the building was twenty thousand dollars.

Cochran Hall. By a gift of $50,000 from Mrs. Sarah B. Cochran, of Dawson, Pa., provision has been made for a College Commons for young men. The plans have been accepted and it is expected construction will begin in the early spring. The building will contain on the first floor a reception hall, a main dining room with seats for one hundred fifty, a club dining room, and a large room for general purposes. The second floor will be devoted to students' studies, sleeping rooms, and baths, and to a guests' suite. The new building will not only provide first class boarding accommodations for young men at reasonable rates, but will constitute a rallying center for the young men of the College. Apart from the dining room and dormitory features of the building the club house feature will probably be one which shall most appeal to the young men. The rooms to be provided for the Young Men's Christian Association will be almost ideal. In addition to the spacious room to be used as assembly, reading and social room, there will be an office for the secretary, a large committee room, and a cloak room. Just off these apartments will be the two sets of bowling alleys with shuffle board space adjoining.. It is the intention to construct the

building of brick with light terra cotta trimmings and a tile roof. It will be of the Italian style of architecture with simple dignified lines, and will, as a whole, be the most imposing building of the entire College group.

Laboratories and Museum.

The Physical Laboratory. The department of Physics occupies the first floor of Wilcox Hall of Science. It comprises a large, well-lighted lecture room, a store room, a general laboratory, two dark rooms, and the professor's office and department library. The lecture room is well adapted to the giving of illustrated lectures; and the department has a very complete projection outfit and a large collection of slides. A number of new pieces of apparatus have just been received, with which the laboratory is being fitted for the study of mechanics; and it is expected that within the year the laboratory will be amply supplied with apparatus for the study of sound, heat, and light. The department has also the facilities for the construction of special pieces of apparatus needed in the laboratory

The Chemical Laboratory. The department of Chemistry occupies the entire second floor of Wilcox Hall. It contains the qualitative and quantitative laboratory, with acommodations for thirty-five students, the balance room, store room, and the professor's office and private laboratory. The laboratories are well lighted and ventilated, conveniently arranged, and well supplied with necessary apparatus and equipment. Each student's table is provided with gas and water. The department library is also located here.

The Biological and Geological Laboratories. These laboratories have recently been moved to the third floor of Ruter Hall where there is ample space and good light. The main laboratory receives the direct north light and is fitted with tables and microscopes for twenty students. In the same room there are placed a large aquarium table fitted with running water, other tables for balanced aquaria, and cases containing the herbarium, and other material used in the laboratory work. The other half of the floor is divided into a lecture room, an office, a store room, and a smaller laboratory for advanced students. The lecture room contains cases for a collection of animals, charts, models, etc., used in lectures. The library, consisting of three hundred well selected volumes, is placed in the smaller laboratory. This room is also fitted with all needed histological, embryological, and bacteriological apparatus. During the present year, the running water aquaria have been equipped and both fresh and salt water animals kept in them.

The Astronomical Observatory is equipped with a nine-inch objective made by Brashear, of Allegheny, Pa., and with a smaller instrument, with a seven and one-half inch aperture, made by Alvin Clark and Son, mounted for the special use of students. Other equipment includes a transit, a chronometer, a sextant, and a siderial clock. The clock is the gift of the children of Milton B. Goff, LL. D., in memory of their father, an alumnus and formerly professor of mathematics in the College. The mountings and other fixtures of the observatory were supplied by Messrs. Warner and Swasey, Cleveland, Ohio.

Engineering Apparatus. In Mathematics and Engi-

neering all necessary instruments, such as transits, levels, rods, and chains, for illustrating pure and applied mathematics are provided and are in practical use by the students in those subjects.

The Museum embraces several distinct collections of minerals, shells, fossils, etc.

The extensive and valuable Natural History Collections are displayed on the first and second floors of Ruter Hall. The collections of minerals include more than eight thousand specimens and are especially noteworthy. There is also a series of Ward casts of fossils, which, together with a growing collection of originals, forms an excellent basis for the work in Paleontology. There are three cases of shells which include several thousand species. The Zoological and Botanical collections are placed in the Biological laboratories where they are easily accessible to students of these subjects.

It is the intention to make the study of these collections an integral part of the work in Biology and Geology.

The museum is open every Saturday, while the College is in session, from one to three p. m. At other times visitors are admitted on application to the custodian.

Library and Reading Room.

The library contains more than twenty-two thousand volumes, in addition to fifteen hundred volumes of magazines and more than eight thousand pamphlets. In addition to the general library expenditures each department has a liberal annual appropriation which provides the best and most modern technical and reference books. To these libraries and to the

reference library students have free access, and thus early become familiar with the correct use of books and acquire something of the bibliographic sense. The reference library and reading room are open at convenient hours daily except Sunday. From the general stacks books may be drawn under the usual necessary regulations. The Reading Room provides for students a wide range of periodical literature, both technical and general.

The periodical list includes the following:

American Magazine.
American Naturalist.
American Historical Review.
American Journal of Sociology.
American Journal of Archaeology.
American Journal of Mathematics.
American Journal of Philology.
American Chemical Journal.
Astronomische Nachrichten.
Atlantic Monthly.
Biblical World.
Biological Bulletin.
Botanical Gazette.
Bookman.
Century.
Chautauquan.
Classical Journal.
Classical Philology.
Classical Review.
Contemporary Review.
Cosmopolitan.
Educational Review.
Education.
Engineering News.
Expositor.
Forum.
Fortnightly Review.
Harper's Magazine.
Harper's Weekly.
Homiletic Review.
Independent.
Journal of Geology.
Journal of Chemical Society.
Journal of Philosophy.
Library Journal.
Literary Digest.
Missionary Review.
McClure's Magazine.
Mind.
Modern Philology.
Nation.
North American Review.
Nineteenth Century.
Outlook.
Outing.
Popular Science Monthly.
Physical Culture.
Reader's Guide.
Records of the Past.
Reports Palestine Exploration Fund.
Reports Egyptian Exploration Fund.
Reports Petrie's Exploration Fund.
Reports Society of Biblical Archaeology.
Science.
Scribner's Magazine.
Scientific American and Supplement.
World To-Day.
World's Work.

In addition, the Library is supplied with a large number of daily and weekly newspapers, both religious and secular.

Each of the men's literary societies has in its own room a library of about twelve hundred well selected volumes, which may be withdrawn for home use by members.

In addition to the above libraries, students have free access to the Meadville Public Library, which has a good collection of works of general reference and literature and current fiction.

GENERAL PURPOSE.

This institution is a college not a university. It therefore does not undertake to fit the student to enter any profession without further technical study. In all departments of instruction the end sought is not specialization but thorough discipline and correct habits of observation and reflection. It is upon this principle that the curricula are based. For the first two years all subjects are prescribed. These studies are such as have been found to be best adapted to secure symmetrical development. For the last two years a wide range of electives is offered enabling the student to lay the foundation for subsequent professional study. By a wise choice of electives a student may in some cases shorten by a year the time required to complete his professional course. The experience of the college proves that its graduates are enabled to distinguish themselves in various careers whenever they have added to their college training the special equipment for such professions.

A large portion of college graduates enter not upon professional but upon business life. The general principle above stated applies to them with as much force as to those who enter professions. The training of a college does not teach a man how to do business successfully, but it does prepare him to learn any business rapidly, and to attain large success, if he has the requisite talent.

COURSES OF STUDY.

The College offers three courses of study leading to the degree of Bachelor of Arts and two leading to the degree of Bachelor of Science. The entrance requirements for all courses are equal in amount and substantially equivalent in character. The requirements in English, Mathematics, History, and Science are the same for all courses. Work in two foreign languages is required in all courses, but for the courses leading to the degree of Bachelor of Science, advanced work in Mathematics, Biology, Chemistry, or Physics may be substituted for part of one language. The entrance requirements for all courses are given in detail on the following pages.

The Bachelor of Arts Courses.

1. **The Classical Course** closely adheres to the ideal of the old college course, founded upon thorough work in the ancient languages, English, and History, with enough Mathematics and Science to insure symmetrical mental development, and with a wide range of electives, enabling a student to do special work in favorite lines.

2. **The Latin and Modern Language Course** is identical in purpose and matter with the Classical Course except that modern languages are substituted for Greek.

3. **The Latin-Scientific Course** includes a wide range of scientific work, together with a liberal proportion of culture studies. It is adapted to the needs

of those students who desire a course based upon the humanities, leading to the degree of Bachelor of Arts, but laying particular stress upon scientific subjects.

The Bachelor of Science Courses.

1. **The Scientific Course** emphasizes particularly mathematical and scientific studies, and furnishes a well-rounded equipment for further scientific studies or for the numerous new pursuits opened by modern invention and science.

2. **The Civil Engineering Course** is intended for those who desire to fit themselves for some branch of civil engineering work. It is adapted to the needs both of those who will go immediately into practical work and of those who will pursue advanced technical studies.

Special Students.

Persons desiring to pursue studies in the College are, as a rule, required to be prepared to enter the Freshman class as candidates for some one of the degrees. Under exceptional circumstances, however, persons who are not candidates for a degree may be admitted as special students and allowed to pursue selected studies. Every such person will be required to satisfy the Faculty that he is prepared to do, with profit, the work which he selects. Each case will be decided on its own merits.

REQUIREMENTS FOR ADMISSION.

All subjects required for admission to any of the courses of study are arranged in Groups, which will be found described in detail on the following pages. In all of the groups other authors and other works than those specified will be accepted if fully equivalent in quantity and character.

The particular groups required for admission to each of the several courses will be found designated on pages 32 and 33.

Groups.

I. ENGLISH.—1. *Reading and Practice.* A limited number of books are assigned for reading. The candidate is required to present evidence of a general knowledge of the subject-matter of these books, and to answer simple questions on the lives of their authors. The form of examination will usually be the writing of a paragraph or two on each of several topics, to be chosen by the candidate from a considerable number—perhaps ten or fifteen—set before him in the examination paper. The treatment of these topics is designed to test the candidate's power of clear and accurate expression, and calls for only a general knowledge of the substance of the books. In place of a part or the whole of this test, the candidate may present an exercise book, properly certified to by his instructor, containing compositions or other written work done in connection with the reading of books. In preparation for this part of the requirement it is important that the candidate shall have been instructed in the fundamental principles of rhetoric.

The books set apart for the examination will be:—

In 1907 and 1908—Shakspere's Macbeth and The Merchant of Venice; Addison's The Sir Roger de Coverley Papers in The Spectator; Irving's Life of Goldsmith; Coleridge's The Ancient Mariner; Scott's Ivanhoe and The Lady of the

Lake; Tennyson's Gareth and Lynette, Lancelot and Elaine, and The Passing of Arthur; Lowell's The Vision of Sir Launfal; George Eliot's Silas Marner.

2. *Study and Practice.* A smaller number of books are assigned for more careful study. The examination upon these books covers subject-matter, form, and structure, and also tests the candidate's ability to express his knowledge with clearness and accuracy. In addition, the candidate may be required to answer questions involving the essentials of English grammar, and questions on the leading facts in those periods of English literary history to which the prescribed works belong.

The books set for this part of the examination will be:—

In 1907 and 1908—Shakspere's Julius Cæsar; Milton's L'Allegro, Il Penseroso, Comus, and Lycidas; Burke's Speech on Conciliation with America; Macaulay's Essay on Milton and Life of Johnson.

II.—MATHEMATICS. (*a*) *Elementary Algebra.*—Fundamental operations, factors, common divisors and multiples, involution including the binomial theorem for positive integral exponents, radicals, quadratic equations, ratio and proportion, theory of exponents, and arithmetic and geometric series.

The text used should be such a book as Tanner's Elementary Algebra.

(*b*) *Plane Geometry.*—The general properties of plane rectilinear figures, similar polygons, areas, and the measurement of polygons and the circle; the solution of original exercises, including loci problems.

(*c*) *Solid Geometry.*—The relations of planes and lines in space; the properties and measurement of prisms, pyramids, cylinders, cones, and the sphere; the solution of original exercises, including loci problems.

The text used in geometry should be the equivalent of Beman and Smith's Geometry or Phillips and Fisher's Geometry.

Ordinarily the time spent should not be less than five hour recitations weekly for two full school years.

III. LATIN.—Grammar. The inflections; syntax of nouns and verbs; general sentence structure, including conditional and relative sentences, indirect discourse, and the subjunctive. Prose composition of detached sentences or connected passages based on the texts read. Cæsar, Gallic War, four books. Cicero, seven orations (the Manilian Law to count as two). Vergil, Aeneid, six books. The Roman method of pronunciation is used.

Ordinarily the time spent should not be less than five hour recitations weekly for three full school years.

IV. GREEK.—Grammar. The inflections of nouns and verbs; the principles of the syntax of nouns and verbs; the structure of sentences in general, with particular regard to relative and conditional sentences and to indirect discourse. Prose composition, adapted to test the student's knowledge of grammatical constructions and based on the texts read.

Xenophon: The first four books of the Anabasis and the first two books of the Hellenika. The first three books of Homer's Iliad may be offered instead of the Hellenika.

Ordinarily the time spent should not be less than five hour recitations weekly for two full school years.

V. GERMAN.—Joynes-Meissner Grammar completed; translation of four hundred pages of modern German prose and one classic drama; practice in conversation.

Ordinarily the time spent should not be less than five hour recitations weekly for two full school years.

VI. FRENCH.—A thorough knowledge of French grammar; ability to read French prose and simple poetry; ability to translate easy passages of English into French; ability to write French from dictation. Students are expected to have read at least five hundred pages of French from at least two well-known modern authors, but no amount of reading will be accepted in place of a thorough knowledge of the grammar. As French is the language of the class-room, it is essential that candidates for admission should have some practice in French conversation.

Ordinarily the time spent should not be less than five hour recitations weekly for two full school years.

VII. HISTORY.—United States, the equivalent of Montgomery's Leading Facts of American History. Eastern Nations and Greece, the equivalent of Botsford's History of Greece. Rome, the equivalent of Botsford's History of Rome. Civil Government, the equivalent of Fiske's Civil Government.

VIII. SCIENCE.—Physical Geography, Gilbert and Brigham. Physiology, Colton. Physics, Millikan and Gale, with experiments.

More extended work in one or two of the above subjects will be accepted in place of shorter courses in the three. Elementary Biology or Chemistry will be accepted in place of one of the subjects.

Groups Required for Admission.

For admission to the several courses the following groups are required:

Classical Course, I., II., III., IV., VII., VIII.

For Group IV. the student may offer Group V. or Group VI. In that case he will pursue the study of Greek for four years in his college course.

Latin and Modern Language Course, I., II., III., VII., VIII., and V. or VI.

For Group V. or VI. the student may offer Group IV. In that case he will take both German and French in his college course—two years of the former and one year of the latter.

Latin-Scientific Course, I., II., III., VII., VIII., and IV. or V. or VI.

Scientific Course, I., II., III., VII., VIII., and V. or VI.

For Group III. an equivalent amount of work in one modern language may be offered; or work in a modern language equivalent to two-thirds of the Group, and one of the following subjects:

1. Mathematics, including College Algebra, Plane and Spherical Trigonometry.

2. Chemistry.
3. Biology—(Zoology, or Botany, or both).
4. Advanced Physics.

The time spent must have been not less than five hour recitations weekly for a full school year. If 2 or 3 or 4 is offered, laboratory work must have formed an important part of the work, and laboratory note books and other evidence of the work done, must be presented, all properly certified to by the teacher.

Civil Engineering Course. The requirements are the same as for the Scientific Course.

Admission With Conditions.

Students who have not fully completed the subjects specified for the course they wish to enter may be admitted to the Freshman Class conditionally, but not if the sum of their deficiencies exceeds a half year's work, nor if in the judgment of the Registration Committee they are not fitted to do college work to advantage. They will be admitted to such college classes as they may be qualified to enter and will be given an opportunity to remove their deficiencies in the Preparatory School. Under certain fixed restrictions credit may be obtained at entrance for work done in college subjects and such advanced credit may be offset against deficiencies in preparatory work until the latter can be removed.

All admission conditions must be removed before the beginning of the Sophomore year.

Entrance Examinations.

Examinations for admission are held on Monday and Tuesday of Commencement week, and on Monday and Tuesday preceding the opening of the First Term.

All Examinations except those taken in Meadville are under direction of the College Entrance Examination Board, whose certificates are accepted in place of examinations in all subjects.

Admission by Certificate.

Certificates for all the work required for admission will be received from approved schools. But students entering by certificate are considered as on trial until the completion of the mid-year examinations, and the right is reserved to require further preparatory work from students who are not able to make satisfactory progress in college classes.

In all cases an examination in English is required, adapted to test the student's power of correct and idiomatic expression. No one will be accepted in English whose work is notably defective in point of spelling, punctuation, idiom, or division into paragraphs.

Principals of schools desiring to be placed on the approved list are invited to address the President.

Diplomas from the Regents of the State of New York will be accepted. All other certificates must be made out on special blanks, which will be sent on application.

The applicant for admission should also bring with him all laboratory note-books, exercise books, mounted specimens, and other evidence of work done, properly certified to by the teacher.

All candidates for admission must present satisfactory testimonials of good moral character; and certificates of regular dismission will be required from those who have been members of other colleges.

COURSES OF INSTRUCTION
BY DEPARTMENTS.

In this detailed description of the courses of instruction the number of "hours" refers to the number of hour recitations weekly. Each term is eighteen weeks in length.

All courses are offered yearly, except as specially noted.

Any elective course may be withdrawn if not chosen by at least four students.

Two hours of laboratory work are counted as equivalent to one recitation hour.

Astronomy.

The courses in Astronomy have two objects in view. Course I. is a general descriptive course, designed to give the student a comprehensive view of the science, and to acquaint him with the history of the growth of the universe, and the laws which govern its members. It also gives the student an opportunity to study the members of the Solar System, the Moon, Star Clusters, and Nebulae, with the nine-inch Equatorial in the Newton Observatory.

Course II. is practical, and is intended primarily for engineering students. In this course, the student becomes familiar with the use of the transit and the sextant in determining time, latitude, and longitude.

COURSE I.—General Descriptive Astronomy. A study of the earth and its relations to the other members of the solar system; the laws which govern the phenomena of the solar system; and a general descriptive outline of the heavenly bodies. Open to those who have had Mathematics I.

Second term, three hours.

COURSE II. — Field Astronomy. Determination of time, latitude, and longitude, by the transit and sextant. Open to those who have completed Mathematics I. and Astronomy I.

Designed especially for engineers, and those who wish to teach Astronomy.

First term, two hours.

COURSE III. — Spherical and Practical Astronomy. For advanced students. The theory of observations and instruments. The theory and practice of determination of time, latitude, and longitude. Eclipses and occultations. Double star observations. Positions of planets and comets with the nine-inch equatorial. Open to students who have had Mathematics I. and II., Physics I. and II., and Astronomy I.

Throughout the year, three to five hours.

Biology.

It is the aim of this department, on the one hand, to give the student a general knowledge of the fundamental facts and principles of Biology; on the other hand, to familiarize him with the methods of investigation in this science as a preparation for advanced work and original research. Courses I., II., III., and IV. are adapted to meet the needs of a general college training. Courses V. and VI. are intended for those who expect to become professional biologists, science teachers in high schools, or physicians. Practical work in the laboratory forms a valuable part of the training of each course.

COURSE I.—Elementary Zoology. A comprehensive course in which a survey of the whole field of Zoology is given. The course is planned to meet the needs of those who do not have the opportunity to pursue the subject further, but at the same time it serves as an introduction to the more advanced courses. The laboratory work consists of the study of the external morphology of a series of typical animals, histology, development of the starfish, etc. Lectures and recitations, two or three hours a week; laboratory work, three hours a week.

First term, four hours.

COURSE II.—Elementary Botany. A course in Botany similar to the course in Zoology outlined above except that more attention is given to ecology. The laboratory work consists of the study of a series of typical plants—Spirogyra, Moulds, Mosses, etc. This course forms the second part of Course I. and should be taken the same year, though they may be taken independently. Lectures and recitations two or three hours a week, laboratory work three hours a week.

Second term, four hours.

COURSE III.—Advanced Zoology. Habits and structure of animals. The laboratory work of this course consists of the careful dissection of type forms of animals. During the first term those Invertebrates which illustrate the development of Vertebrates are studied. The second term is devoted to the Vertebrates. Lectures and recitations one hour a week, laboratory work four hours a week. Elective for all who have completed Course I.

Throughout the year, three hours.

Given in 1908-9.

COURSE IV.—Advanced Botany. First term, plant morphology and physiology. Second term, special morphology of certain groups of the plants. Lectures and recitations one hour a week, laboratory work four hours a week. Elective for all who have completed Course II.

Throughout the year, three hours.

Given in 1907-8.

COURSE V.—Vertebrate Histology. Training in the preparation of tissues for examination under the microscope. Each student prepares at least one hundred slides of vertebrate tissues which are later studied and described. This course is especially valuable for teachers or for those intending to study medicine. Laboratory work with occasional lectures, eight hours a week. Elective for all who have completed Course III., and for Juniors and Seniors who have completed Course I.

First term, four hours.

COURSE VI.—Vertebrate Embryology. A study of the development of the chick up to the end of the third day. Most of the

slides studied are furnished to the students, but each student is required to prepare whole mounts and several sets of serial sections. Laboratory work with occasional lectures, eight hours a week. Elective for all who have completed Course V.

Second term, four hours.

Additional Courses.—Special work in Entomology, Sanitary Biology, or additional work in Courses V. and VI. will be given when there is a demand for the work.

Chemistry.

The courses in this department are planned chiefly for a cultural training. The aim is to give the student a correct idea of the method of reaching scientific results in general and at the same time to lead to independent research both for mental discipline and for the acquirement of real knowledge of the subject. The practical work in the laboratories is emphasized and forms a large part of each course.

COURSE I.—Inorganic Chemistry. The principles of the science in connection with a study of the non-metallic elements and compounds are given in this course. Practice in the writing of chemical equations and in the solution of chemical problems is emphasized. The lectures are illustrated with experiments which are, as far as possible, repeated by the students in the laboratory. Lectures and recitations three hours a week, laboratory work two hours a week.

First term, four hours.

COURSE II.—Inorganic Chemistry. A continuation of Course I. It includes a study of the metallic elements and their compounds, and is introductory to Course III. Lectures and recitations two hours a week, laboratory work three hours a week. Open to those who have completed Course I.

Second term, four hours.

COURSE III.—Qualitative Analysis. Special attention is given in this course to the analytic reactions of each one of the more common inorganic bases and acids. The more intimate

knowledge of the elements and their compounds thus gained enables the student to generalize and classify chemical phenomena. Thorough practice in the separation of metals and acids from each other in unknown liquid and solid mixtures and in the preparation of minerals for analysis is given. Laboratory and lectures six hours a week throughout the year. Open to those who have completed Course II.

Throughout the year, three hours.

COURSE IV.—Quantitative Analysis. The aim of this course is to give a thorough knowledge of the principles of gravimetric and volumetric analysis, and their application in the separation and determination of the common bases and acids from salts, minerals, etc. It is of special value as a training in the more refined methods of manipulation, neatness, and accuracy. Laboratory and lectures six hours a week throughout the year. Open to those who have completed Course III.

Throughout the year, three hours.

COURSE V.—Organic Chemistry. A course covering the Chemistry of the hydro-carbons of both the paraffin and benzene series and their derivatives. Lectures and recitations three hours a week. Open to those who have completed, or are taking, Course IV.

Throughout the year, three hours.

COURSE VI.—Organic Chemistry. A laboratory course comprising the methods of preparation and purification of a number of typical organic compounds and the detailed study of their properties, reactions, and relations. Six hours of laboratory work a week. Open to those who have completed, or are taking, Course V.

Throughout the year, three hours.

COURSE VII.—History of Chemistry. A course in which the history of the subject is traced principally through the work of prominent chemists. Particular attention is paid to the history of the last two centuries. Open to those who are taking Course IV. or Course V.

Throughout the year, one hour.

Economics.

Particular attention is given to the study of the development of economic life and institutions, American conditions being specifically analyzed. Students are made familiar with the accepted principles of the science and are given a practical acquaintance with the complex modern economic organization. Encouragement is also offered to individual research, leading to possible future specialization. Lectures, papers, and comparative examination of various authorities constitute the method of instruction.

COURSE I.—Principles of Economics. Introductory survey of industrial history; Production and Distribution, compassing the accepted elements of the science. The text used is Saeger's Economics, and required readings are assigned in Marshall's Principles of Economics and in the Austrian authorities.

First term, three hours.

COURSE II.—Applied Economics. This is a continuation of Course I. and is a detailed examination of the economic principles applied in trusts, labor, tariff, taxation, and finance. Social economics as presented in Wright's Practical Sociology is included. Lectures, conferences, papers, and individual investigations are the methods of instruction.

Second term, three hours.

COURSE III.—Economic Theories. History of the development of economic thought including a study of the leading principles of the science as propounded in Adam Smith, Ricardo, Mill, Senior, Menger, Weser, Bohm Bawerk, Walker, and Clark. The seminar method is used. Open to a limited number of those who have completed Courses I. and II.

First term, two hours.

COURSE IV.—Transportation. A course of lectures on the American Railway—a study of railway economics and the problems of government regulation. An extensive use is made

of the Inter-State Commerce Commission findings and national industrial data. Open to advanced students.

Second term, two hours.

Engineering.

The instruction in this department covers the technical subjects that lie at the basis of engineering work. Constant use is made of instruments and much of the work consists of actual field work. With the exception of Course I. the subjects are open only to students in the Civil Engineering Course.

COURSE I. — Surveying, with level, transit, and compass. Methods of determining areas. Laying out and dividing land; city surveying; plotting and topographical drawing.

Second term, three hours.

COURSE II.—Railroad Engineering. This course includes a reconnaissance, preliminary and location surveys, and estimates for a line of about one mile in length through as difficult a country as is usually encountered. Plots and working drawings.

First term, three hours.

Since Engineering I. and II. consist largely of field work, students taking them must be careful to arrange their work in such a way as to leave their afternoons free for such practical work.

COURSE III.—Highway Engineering. Methods of constructing Macadam, Telford, gravel, and earth roads; wood, stone, brick, and asphalt pavements for cities; and the methods of maintaining country roads and city pavements.

Strength and Resistance of Materials. Foundations on land, on piles, and under water. The building of stone, brick, and concrete masonry. Masonry dams, retaining walls, bridge abutments and piers, culverts, arches, and sewers.

Throughout the year, three hours.

COURSE IV.—Bridges and Roofs. Including analytical and and graphical determination of the stresses in bridges and

roofs together with a study of actual structures. Designs of a simple roof truss and of a simple highway bridge with working drawings.

Throughout the year, four hours.

English Bible.

The work in this department is intended to open to the student the rich stores of literature contained in the Bible; to familiarize him with the history of the Hebrew people, their civilization, and their influence on the world; and to lead to the critical study of the spirit and form of Hebrew literature as it is shown in the English version. The English Bible is studied as a great monument of our literature and as the source of our knowledge of one of the great civilizations of the world. The courses do not touch questions of doctrine or belief.

COURSE I.—A General Introduction to the English Bible. This course takes up the history of the Hebrew, Greek, and English Bibles, and the history of the Hebrew people as told by themselves. It then passes on to a study of the different types of literature to be found in the Old and New Testaments. Each type is studied as a whole from both the historical and the literary points of view, after which examples of each are taken up for more detailed study. The course is an introduction to the more elaborate courses that follow. It is made up chiefly of lectures and reference work, and, since it forms a part of English I., each student is required to keep carefully written note-books, which are at intervals examined by the instructor in English.

Throughout the year, two hours.

COURSE II.—New Testament History and Literature. Stress is here laid on the importance of understanding the political, social, and religious background of the New Testament. To that end the Maccabean and Roman periods of Jewish history are carefully studied. The New Testament literature is

treated from the standpoint of its relation to the development of church life and thought rather than from the point of view of literary form.

Throughout the year, two hours.

Given in 1907-8.

COURSE III.—Old Testament History and Literature. The method here pursued is similar to that in the preceding course. The history of Syria and Palestine from the earliest times down to 165 B. C. is first studied. The Old Testament literature is then taken up in the order of its historic development, and its relation to the life, thought, and external history of Israel is brought out. This course and the preceding one aim to give a comprehensive grasp of biblical history and literature.

Throughout the year, three hours.

Given in 1908-9.

English Language and Literature.

The aim of this department is to give the student such thorough instruction in the writing of English as will make his language the instrument in his hand for the easy, idiomatic, and energetic expression of his thought; to train him, both by theory and by practice, for natural and effective public address; to acquaint him with the essential facts in the development of the English language and literature, and with the great authors who have created that literature; and, finally, to render him sensitive to the literary and aesthetic values of life. Rigorous and painstaking habits of scholarship are constantly inculcated; but the student is never allowed to forget that literature is vital—that it draws its subject-matter and its inspiration from life, and in turn transmutes the crude and imperfect forms of life into beauty and character.

COURSE I.—The Elements of Rhetoric and collateral reading. The chief purpose of this course is to train the student in the

use of easy, idiomatic English. It is believed that successful instruction in rhetoric depends not so much upon precept as upon example and practice; so the student is encouraged to write freely upon subjects that appeal to him, and that spring naturally from the interests and activities of his daily life. The instructor corrects each paper in detail, and makes appointments with each student for private consultation. The instruction is made extremely flexible, and freshness and variety of method are constantly sought.

Throughout the year, one hour.

Public Speaking. One hour weekly is devoted to Course I. in Public Speaking.

English Bible as literature. This work is described under English Bible I.

The above three subjects are scheduled together as English I., and are to be taken at the same time.

Throughout the year, four hours.

COURSE II.—**Advanced Rhetoric.** A careful study of the four great forms of discourse, Narration, Description, Exposition, and Persuasion. The method of instruction is both critical and constructive. Lectures, text-book, and class discussion. Fortnightly themes are required; and provision is made for private consultation with the instructor.

First term, three hours.

COURSE III.—**Introduction to English Literature.** 1. An outline history of the development of English literature. Stopford A. Brook's A History of English Literature. 2. Collateral reading. 3. The study and interpretation, in class, of Shakspere's Hamlet, Milton's Minor Poems, and Pope's Rape of the Lock. Oral recitation, lectures, class discussion, and written tests.

Second term, three hours.

COURSE IV.—**English Poetry** from 1789 to 1832. Copious readings from the poetry of Burns, Wordsworth, Scott, Byron, Shelley, and Keats. At the beginning of the year, several lectures are devoted to the setting forth of the historical, social, religious, and literary conditions that gave rise to the literature under consideration. The constant aim is to arouse

in the mind of the student an intelligent enthusiasm for the great poetry of the period; and, while holding him to accurate and diligent scholarship, to show him how life and literature interpenetrate.

Open to those who have completed Courses I., II., and III.

Throughout the year, three hours.

Given in 1908-9.

COURSE V.—The Victorian Period of English Literature. Landor, Carlyle, Tennyson, Arnold, Ruskin, and Browning. Conducted in the same manner as is Course IV., with which it alternates.

Throughout the year, three hours.

Given in 1907-8.

COURSE VI.—Elements of Literary Criticism. Winchester's Principles of Literary Criticism. A systematic inquiry into the essential elements of literature, and a detailed consideration of the various forms of literature. A considerable amount of illustrative reading is expected, and the student is required to test two or three classic productions by a practical application of the principles of criticism.

Open to those who have taken Course IV. or Course V., and for a limited number who have taken Course III.

First term, two hours.

Given in 1908-9.

COURSE VII.—American Literature. Outlines of its development. Lectures upon representative authors. The critical study and interpretation of masterpieces. Appreciations and essays by members of the class.

Elective under the same conditions as Course VI.

Second term, two hours.

Given in 1908-9.

COURSE VIII.—Prose Fiction. Bliss Perry's A Study of Prose Fiction. The novel, the romance, and the short story. Studies in the structure and significance of these popular forms of modern English fiction. Illustrative readings and carefully prepared papers.

Elective under the same conditions as Course VI.

First term, two hours.

Given in 1907-8.

COURSE IX.—Shakspere. Analytic and interpretative studies of four plays of Shakspere, As You Like It, Othello, King Lear, and The Tempest. A careful reading of Dowden's Shakspere Primer will be required in connection with this course.

Elective under the same conditions as Course VI.

Second term, two hours.

Given in 1907-8.

COURSE X.—Anglo-Saxon. Old-English Grammar. Reading of selections in prose and verse from Bright's Anglo-Saxon Reader.

Elective for all who have completed Courses II. and III.

First term, three hours.

COURSE XI.—Chaucer. Middle English forms and syntax The Canterbury Tales and minor poems.

Second term, three hours.

French Language and Literature.

It is the aim of the courses in this subject to give to the student (1) an accurate knowledge of the language of the present time both as written and spoken; (2) appreciation of the more important masterpieces of the literature proportionate to the knowledge of the language; and (3) a knowledge of the historical development of the literature.

The work as above outlined is carried on by means of recitations, the writing of prose and essays, the hearing of lectures in French, and by collateral readings. Much stress is laid from the beginning upon the ability of the student to express himself directly in the language. With this end in view the work of the class-room is conducted in French, and the phonetic

methods are employed in order to give accuracy of pronunciation.

COURSE I.—Elementary French. Fraser and Squair's Grammar is used as a reference book. Oral and written exercises. Dictation. Reading of such easy prose as Guerber's Contes; Halevy, L'Abbe Constantin; De La Brete, Mon Oncle et Mon Cure. Memorizing selected fables of La Fontaine.

Throughout the year, four hours.

COURSE II.—Elementary French Continued. Reading of such authors as George Sand, Merimee, Daudet, Augier, Dumas, etc. Memorizing of selected poems. In this course brief outlines of the history of literature are also given with collateral readings from celebrated authors.

Throughout the year, four hours.

COURSE III.—French Literature in the Seventeenth Century. A study of the drama and of the miscellaneous literature of the period. Corneille, Racine, Moliere, La Fontaine, Pascal, Bossuet, Fenelon, Mme. de Sevigne.

Throughout the year, three hours.

COURSE IV.—French Literature in the Eighteenth Century. This course will treat of the time and influence of Voltaire, Montesquieu, Rousseau, the Encyclopedists, Beaumarchais, Lesage, Andre Chenier.

Throughout the year, three hours.

Given in 1908-9.

COURSE V.—French Literature in the Nineteenth Century. A study of the principal authors of this period. Chateaubriand, Lamartine, Victor Hugo, Alfred de Vigny, Alfred de Musset, Theophile Gautier, Leconte de Lisle, Sainte-Beuve, Balzac, with a brief survey of contemporary writers.

Throughout the year, three hours.

Given in 1908-9.

COURSE VI.—Lyric Poetry of the Nineteenth Century. In this course the different schools of poetry will be discussed and copious extracts will be read from representative poets, such as Lamartine, Victor Hugo, Alfred de Musset, Alfred

de Vigny, Theophile Gautier, Leconte de Lisle, Sully Prudhomme, Francois Coppee.

Open to those who have completed Course IV. or Course V.

First term, two hours.

COURSE VII.—The Theatre in the Nineteenth Century. In this course the development of the theatre during the period will be studied in detail. Dramas of such representative authors as Victor Hugo, Scribe, Alexandre Dumas, Augier, Sardou, Rostand, Meilhac and Halevy, will be read and discussed.

Open to those who have completed Course IV. or Course V.

Second term, two hours.

Geology.

The courses in Geology are eminently general culture courses, explaining as they do so many common phenomena and leading the student to take a greater interest in natural objects. The class work is supplemented by practical work in the field, museum, and laboratory.

COURSE I.—Structural and Dynamic Geology as illustrated by the region about Meadville. The field work consists of a number of excursions (usually six) to points of interest in the immediate vicinity. Recitations three hours a week. Open to those who have completed an elementary course in Chemistry.

First term, three hours.

COURSE II.—Historical Geology and Paleontology. Chiefly the history and stratigraphy of the North American continent. During this term the laboratory work consists of the study of a series of typical fossils. Recitations two hours a week, laboratory work two hours a week. Open to those who have completed Biology I. and Geology I.

Second term, three hours.

COURSE III.—Mineralogy. Crystallography, descriptive mineralogy and determination of minerals. Open to those

who have completed Geology I., and who have completed or who are taking Chemistry III. Recitations and laboratory work. The right is reserved to withdraw this course if necessary.

Second term, three hours.

German Language and Literature.

The methods employed in the first two years of the course are intended to establish a broad and thorough foundation for an appreciative study of German literature in the advanced courses. Accurate and intelligent pronunciation is insisted upon; and the principles of phonetics are presented in simple form and are put to practical use in the reading exercises in the class room. Translation from German into English is employed at the outset, but is discarded when it is no longer needed as a test of the understanding of the text. In prose composition more attention is given to reproductive exercises and theme-writing than to translations. The oral use of the German language in the class room will be constantly increased until the recitations are conducted entirely in German.

A German Conversation Club, in which a special opportunity for linguistic practice is afforded, has been founded among the students of the college. Membership is open to those who have studied German for one or more years.

COURSE I.—Elementary German. Spanhoofd's Lehrbuch der Deutschen Sprache; Huss's German Reader; Storm's Immensee; Baumbach's Im Zwielicht, and Heyse's L'Arrabbiata. The aim of the course is to enable the student to read and understand accurately, without translation, German prose of ordinary difficulty and to acquire some proficiency in writ-

ing and speaking German. Prose composition based on the texts read is a part of this work.

This course represents from five to six terms of ordinary high school work, but may not be taken to remove language requirements for admission to college.

Throughout the year, four hours.

COURSE II.—Intermediate German. First Term.—Schiller's Wilhelm Tell; Lessing's Minna von Barnhelm; Goethe's Hermann und Dorothea begun. German composition once a week.

Second Term.—Hermann und Dorothea completed; a modern novel; Sudermann's Frau Sorge, or Freytag's Soll und Haben. Reproductive translation into German and independent themes are a part of the work.

Open to students who have presented two years of German for admission to college or who have completed Course I.

Throughout the year, four hours.

COURSE III.—Advanced German. First Term.—Select Readings from the novels of Freytag, Kellar, Scheffel, Sudermann, and Frenssen. The history of German literature during the nineteenth century, with its origins in the eighteenth, will be studied, especially the history of the novel.

Second Term.—Schiller's Wallenstein and Thirty Years' War. A study of the political and social background of the picture unfolded in Schiller's dramatic trilogy will be made by reading selections from his Thirty Years' War and doing other reference work in history. Lectures and reports on the life and literary activities of Schiller are a prominent feature of this course. Open to those who have completed course II.

Throughout the year, three hours.

COURSE IV.—Goethe's Life and Works. First Term.—Goethe's Life and Works. Goethe's autobiography, in connection with which several of the earlier productions of the author, especially Die Leiden des jungen Werther, will be read; then the classical dramas, Egmont, Iphigenie auf Tauris, and Torquato Tasso, will be taken up.

Second Term.—Goethe's Faust, Part I., with an outline of Part II., and a history of the Faust legend, will be studied in lectures and recitations.

The reading and interpretation of Goethe's works will be supplemented by a course of lectures on the classic period of German literature. Open to those who have completed Course III.

Throughout the year, two hours.

Given in 1908-9.

COURSE V.—Outline History of German Literature. The aim of this course is to acquaint the student with the most important movements in the history of German literary life, from the earliest times to the twentieth century, special attention being paid to the two classic periods of the twelfth and eighteenth centuries. Koch's Geschichte der deutschen Litteratur will be used as a text-book, which will be supplemented by lectures in German and reports on assigned readings.

Open to those who have completed Course III., and to others by permission.

Throughout the year, one hour.

Course V. may be taken only in connection with Course IV. or Course VI.

COURSE VI.—German Romantic School and Modern German Drama. First Term.—Romantic School, with reference to its social and literary aspects.

Second Term.—The study of German life in the nineteenth century, as reflected in the dramas of Heinrich von Kleist, Grillparzer, Hebbel, Anzzengruber, Wildenbruch, Sudermann, and Hauptmann.

Open to students who have completed Course III.

Throughout the year, two hours.

Given in 1907-8.

Graphics.

The work in this department is eminently practical. The actual needs of engineers are kept in mind, and

the work is adapted thereto. The courses are open only to students in the Civil Engineering Course.

COURSE I.—Free Hand Drawing. Elementary Drawing, including a thorough training of the hand and eye in outline drawing, shading, and lettering.

First term, four hours.

COURSE II.—The use and care of instruments, projection drawing, isometrical and cabinet drawing, and the principles of shading and tinting.

Second term, four hours.

COURSE III.—Descriptive Geometry, as applied to the representation by projection of all Geometrical Magnitudes, the intersections and tangencies of developable, double curved, and warped surfaces. Spherical projections, shades and shadows, and linear perspective.

Throughout the year, three hours.

COURSE IV.—Topographical and Machine Drawing, including tracing and blue-printing.

First term, three hours.

COURSE V.—Architectural Drawing. Working drawings of a frame building.

Second term, three hours.

Greek Language and Literature.

The aim of the department is to lead the students to the acquisition of a living knowledge of the Greek language as an introduction to a practical acquaintance with Greek life and thought. It is believed that by careful and accurate work in the first years of the language the student can gain such knowledge as will enable him to read widely and independently. The courses laid down are such as are thought to be best adapted to that end. The work is varied, and an at-

tempt is made to give a view of all departments of the literature. The department possesses a growing collection of casts of antique sculpture, painted vases and other antiquities, about a thousand photographs, and several hundred lantern slides.

A voluntary class is formed each year for the purpose of special drill in sight reading.

COURSE I. — Homer, The Iliad or the Odyssey. Detailed study of two or three books and rapid reading of as much more as the time allows. This rapid reading of the Homeric poems as literature is made the basis of the study of early Greek life and civilization.

Xenophon, Memorabilia. The more interesting and important passages are carefully read in class. A weekly exercise in composition is based on the Greek text read. The aim is to develop a vocabulary and an accurate knowledge of Greek Syntax.

Throughout the year, four hours.

COURSE II.—Plato, Apology and Crito and selections from Phaedo. Outline of Greek Philosophy.

Lysias and Demosthenes.—Selected orations from one or both of these authors are read in connection with a detailed study of the historical periods.

Greek Literature, text book and lectures. Assigned readings on special topics in Greek history and literature. Reading at sight.

This course is made the basis of the study of historical Greek life and civilization.

Throughout the year, three hours.

COURSE III A.—Greek Drama. Detailed study of two plays and rapid reading of several others. Usually the following will be read: Aeschylus' Agamemnon, Sophocles' Oedipus Tyrannus, Euripides' Medea, and Aristophanes' The Frogs. Individual investigation of special topics. The course is

made not only a study of the rise and development of the Greek Drama, but also a study of literary evolution.

Throughout the year, three hours.

B. Greek Oratory.—Andocides, Isocrates, Demosthenes. The history and politics and the public and private antiquities of the times. Lectures and assigned readings in Greek, English, and German.

Throughout the year, three hours.

One of these courses is given each year. In 1906-7 A. was given. Open to all who have completed Course II.

COURSE IV A.—Classical Archaeology. Egyptian, Babylonian, and Assyrian Art. Mycenaean Civilization. Greek Vase Painting. Greek Architecture.

Throughout the year, two hours.

Given in 1908-9.

B.—Classical Archaeology. Greek Sculpture.

Throughout the year, two hours.

Given in 1907-8.

Courses IVA. and IVB. are given in alternate years. The instruction is mainly by lectures, but text-books are used and a large amount of collateral reading is required. The courses are open to those who have completed Course I., and, under some limitation, may be elected by students having no knowledge of Greek.

COURSE V.—Greek Testament. A minute and critical study of a portion of the New Testament to insure a familiar and accurate knowledge of vocabulary, syntax, and idioms, followed by more rapid reading to develop ease and rapidity in grasping the thought of the original. The purpose of the course is to lay the foundation for exegetical work. Open to all who have completed Course II.

Throughout the year, two hours.

Given in 1908-9.

COURSE VI.—Greek Literature. A careful survey of the field from Homer to the Roman period. One hour a week is devoted to lectures and text-book work, one hour is given to

critical readings in English translations and two hours to readings in Greek. Open to all who have completed Course II.

Throughout the year, four hours.

Given in 1907-8.

COURSE VII.—Greek Literature in English. The course consists of the lectures, text-book work, and English readings of Course VI. It may be elected by students having no knowledge of Greek.

Throughout the year, two hours.

Given in 1907-8.

Hebrew.

COURSE I.—Davidson's Hebrew Grammar, completed. Twelve or more chapters in Genesis read.

Throughout the year, four hours.

This course is given in alternate years.
Given in 1907-8.

History.

The aim of the department is to give that knowledge of the facts and the philosophy of history which belongs to a liberal education. The subjects in periods and countries are planned also to train for university work or to equip for preparation to enter law or journalism. The evolution of European civilization from its sources and the growth and the influence of Angle-Saxon institutions are the general theme of the work. History is presented as a real educative process. The department has the appropriate library authorities for the several courses, and source materials are freely used. Abstracts, maps, essays, and outlines are required in the class work. The method of instruction is a combination of lectures and text-book. Course I. is required for admission to the succeeding courses.

COURSE I.—European History. The period covered extends from the Teutonic migration to the French Revolution. The first term is occupied with mediaeval institutions and the transition to Modern Europe. Robinson's European Readings and Bemont and Monod's Mediaeval Europe are the texts for class guidance. Required readings in standard authorities are assigned. The second term is devoted to the growth of nationalities and the religious and political struggles for balance of power. Lodge's Modern Europe furnishes the outline of the work.

Throughout the year, three hours.

COURSE II.—The Renaissance and the Reformation. The first term is devoted mainly to the Renaissance in Italy and subordinately in England. The political, intellectual, literary, and aesthetic phases of the movement are studied. Burckhardt and Symonds are the authorities used, with Einstein for the English Renaissance. The second term is occupied with the Reformation from Wycliffe to the Peace of Westphalia. The texts are Hausser and Fisher. This course alternates with Course III.

Throughout the year, three hours.

Given in 1907-8.

COURSE III.—French Revolution and Nineteenth Century. The first term follows the causes and the course of the French Revolution and concludes with the Napoleonic Era. A lecture course with references to many authorities, Stephen's Revolutionary Europe and Rose's Napoleon being required.

The second term examines Europe in the Nineteenth Century after the Congress of Vienna, studying the formation of the German and the Italian unity and the continental triumph of liberalism. Seignobos' Europe and Fyffe's Modern Europe are used as outlines of the work.

Throughout the year, three hours.

Given in 1908-9.

COURSE IV.—History of England. The work extends from the Teutonic origins to the Nineteenth Century. Lectures, collateral readings, and text-books. Gardiner's Student's His-

tory and Green's Short History of the English People furnish the outline and references are required in the constitutional histories of Stubbs, Hallam, and Taswell and Langmead, and in the works of Froude, Gardiner, and Lecky. This course alternates with Course V.

Throughout the year, two hours.

Given in 1908-9.

COURSE V.—The Political and Constitutional History of the United States, from 1781 to 1861. The sources are extensively used as found in the government publications, the writings and addresses of statesmen, and the contemporary interpretation of national affairs. Lectures and reports by students on assigned readings in Schouler, Henry Adams, McMaster, Gordy, Rhodes, and the American Statesmen Series. Monographs required of the class each term.

Throughout the year, two hours.

Given in 1907-8.

Italian Language and Literature.

COURSE I.—Elementary Italian. Italian Grammar, Grandgent. Oral and written exercises. Dictation. Texts such as De Amicis, Cuore; Salvatore Farina, Il Signor Io; Goldoni, Il vero Amico. Open to Juniors and Seniors.

Throughout the year, three hours.

COURSE II.—Literature in the Thirteenth and Fourteenth Centuries. Dante, La Divina Comedia; Petrarca, Rime Scelte. Open to Juniors and Seniors.

Throughout the year, two hours.

Latin Language and Literature.

The courses in the Latin department are intended to direct the student to a systematic study of the language and its development, to acquaint him through a varied reading of the best authors with the leading features of the literature, and to make him familiar with the main facts of Roman life and civilization.

Technical grammar and composition are studied only in so far as they contribute to the comprehension of the language. The department is well equipped with books, maps, and facsimiles of inscriptions and has a small collection of photographs.

The instruction is given by means of recitations, supplemented by lectures, and, in the elective courses, by individual work.

COURSE I.—Cicero, De Senectute and De Amicitia.
Livy, Books XXI–XXII, or selections from Books I–XXV.
Weekly exercises in prose composition.

This course includes a detailed review of Latin case structure and syntax, and a specific effort is made to teach right habits of reading and translation. In connection with Livy is made a careful study of the geography of Spain and Italy and of the history of Rome during the Second Punic War. Attention is also directed to the literary characteristics of Livy and of his age.

Throughout the year, four hours.

COURSE II.—Horace, selected Odes and Epodes.
The more common metrical structures are studied so that the Latin can be read with ease. Especial attention is directed to Horace's literary and political life and to as much of the history of the period as sheds light on the subject matter.

Catullus, selected Odes; general discussion of Latin Lyric Poetry.

Plautus and Terence, one play each. In connection with the translation of Plautus and Terence, the course includes lectures on the origin and development of comedy in Rome and on the Roman Theatre. The plays are also made a basis for the investigation of syntactical problems.

Throughout the year, three hours.

COURSE III A.—Tacitus, Annals, Selections from Books I.-VI.

Suetonius, Lives. The Latin texts are used as a basis

for a careful study of the character of Tiberius and the upbuilding of the principate. Collateral reading on the history of the period.

Throughout the year, three hours.

B.—Pliny, selected Letters. Lectures and Papers on Roman private life.

Quintilian, Institutions X. Lectures and discussions on the origin of Roman literary forms.

Throughout the year, three hours.

One of these courses alternates with Course IV. Open to all who have completed Course II.

Given in 1907-8.

COURSE IV.—History of Latin Literature. Lectures are given, alternating with illustrative readings in both Latin and English, from various authors studied. A text-book is used, with assigned work in the various manuals in the library.

This course alternates with Course III. Open to all who have completed Course II.

Throughout the year, four hours.

Given in 1908-9.

COURSE V.—Latin Literature in English. This course consists of the lectures, text-book work, and English readings of Course IV. It may be elected by students without knowledge of Latin.

Throughout the year, two hours.

Given in 1908-9.

COURSE VI.—Roman Philosophy. Cicero, Tusculan Disputations, Book I.; Lucretius, De Rerum Natura, Books I., III., V.

The purpose of this course is to give a general knowledge of the whole field of ancient philosophy, with a careful study of the Stoic and Epicurean systems. Lectures are given, supplementing Mayor's Ancient Philosophy and Zeller's Stoics, Epicureans, and Sceptics.

This course alternates with Course VII. Open to all who have completed Course II.

Throughout the year, two hours.

Given in 1908-9.

COURSE VII.—Introduction to Latin Epigraphy; Roman Topography.

In Epigraphy, lectures and exercises are given, based on Egbert's Latin Inscriptions. During the later part of the year, a study of the topography, architecture, and monuments of Rome is made. The class work is devoted mainly to lectures and reports.

This course alternates with Course VI. Open to all who have completed Course II.

Throughout the year, two hours.

Given in 1907-8.

Mathematics.

The elementary courses in mathematics, all of which are prescribed for students in engineering and sciences, are: College algebra, plane and spherical trigonometry, analytic geometry including conic sections, and differential and integral calculus. These courses may be taken in the freshman and sophomore years. They serve as a sufficient preparation for the ordinary work in physics and physical chemistry, and they mark the minimum of attainments that a teacher of mathematics in a high school or academy should possess.

Courses III.-VI. are elective and presuppose Courses I. and II.

COURSE I.—Algebra. The following topics are considered: Undetermined coefficients, binominal theorem for negative and fractional exponents, logarithms, permutations and combinations, probability, elementary treatment of determinants, and theory of equations, with special reference to the solution of numerical equations of the third and fourth degrees.

Trigonometry.—Plane and spherical with applications to sursurveying and astronomy.

Throughout the year, four hours.

COURSE II.—Analytic Geometry. The straight line, conic sections, general equation of second degree, and an introduction to geometry of three dimensions.

Calculus. The differentiation and integration of functions with the usual applications.

Throughout the year, four hours.

COURSE III.—Differential Equations. For students in engineering, mathematics, and astronomy. This course includes ordinary and partial differential equations with a few geometrical and mechanical applications. Murray's differential equations is used as a text.

Throughout the year, two hours.

Given in 1907-8.

COURSE IV.—Projective Geometry. Lectures, supplemented by reading. Reference books: Reye, Geometrie der Lage; Scott, Modern Geometry; Cremona, Projective Geometry.

Throughout the year, three hours.

Given in 1907-8.

COURSE V.—Functions of a Complex Variable. A general introduction to the theory of functions of a complex variable, following the methods of Weierstrass and Riemann.

Throughout the year, two hours.

Given in 1908-9.

COURSE VI.—Higher Plane Curves. The general properties of curves, the resolution of singularities, and forms of curves of the third and fourth orders. Open to those who have completed Course IV.

Throughout the year, three hours.

Given in 1908-9.

Philosophy.

The aim of this department is to acquaint the student with the chief philosophic theories of the past and present, to cultivate in him the habit of critical and independent thought, and to set forth a consistent

and satisfactory method of dealing with the fundamental problems of speculation.

COURSE I.—Psychology. A general introduction to the subject. A text book is used, which is supplemented by informal lectures, assigned readings, and papers on special topics.

First term, three hours.

COURSE II.—Ethics. A brief survey of the history of ethical thought is followed by an examination of the chief ethical systems of modern times, with a view of arriving at the really valid principles which underlie human conduct. These principles are then applied to the various institutions and natural relations of human life. A text book is used, supplemented by informal lectures.

Second term, three hours.

COURSE III.—History of Philosophy. A study of the chief philosophers and philosophic systems of ancient and modern times. Weber's History of Philosophy is used as a text-book. Open to all who are taking or have taken Course I.

First term, two hours.

Given in 1908-9.

COURSE IV.—Philosophy of Religion. The true basis of knowledge is inquired into, the traditional arguments for the existence of God are critically examined and the attempt is made to show that the theistic conception of the world is a necessary postulate of reason and of human life as a whole. Open to all who have taken Courses I. and III.

Second term, two hours.

Given in 1908-9.

COURSE V.—Theory of Thought and Knowledge. This course is made up of an inquiry into the general nature and conditions of thought, a review and criticism of the traditional logic, a study of proof and the most important logical fallacies, and a critical examination of philosophic scepticism, of realism, and idealism, and of apriorism and empiricism. Open to all who have taken or are taking Course I.

First term, three hours.

Given in 1907-8.

COURSE VI.—Metaphysics. This applies the conclusions reached in the preceding course to the questions relating to reality. Our chief metaphysical ideas are examined and an attempt is made to fix their meaning. These results are then applied to the construction of a consistent and valid theory of the nature of the material world and of the human soul. Open to all who have taken Courses I. and V.

Second term, three hours.

Given in 1907-8.

Physics.

This department comprises courses in theoretical and practical physics and mathematical physics.

The aim of the instruction in theoretical and practical physics is to give the student a thorough knowledge of the principles and laws that govern physical phenomena, and to acquaint him with the actual operations of these principles and laws. The work is presented to the student by lectures, with experimental demonstrations and illustrations of the laws of physical phenomena, combined with recitations, and the solution of problems. In the practical work, the student performs such experiments in the laboratory as will give him a practical knowledge of the principles and laws of physics.

The first two courses are elementary and are intended primarily for general culture. The advanced courses are designed for those more especially interested in science, those who expect to teach the subject, or those who are planning to pursue engineering.

Courses III. and IV. are designed for civil engineers and those anticipating electrical or mechanical enginering. They will be found of profit also to any taking an interest in applied or theoretical mathematical physics.

COURSE I.—General Physics. Mechanics, Sound, Heat, Light, Electricity, and Magnetism. A general course in which the laws, theorems, and phenomena of physics are carefully developed and presented. Lectures, experimental demonstrations, and recitations. Open to those who have completed Mathematics I.

Throughout the year, four hours.

COURSE II.—Experimental Physics. Laboratory work to supplement Course I. The student is required to determine the physical constants and to demonstrate the laws of physics.

Throughout the year, two hours.

COURSE III.—Elementary Analytic Mechanics, Statics, Kinematics, and Kinetics. Special attention is given to the application of mechanics to engineering problems. Open to those who have completed Mathematics I. and II. and Physics I. and II.

Throughout the year, two hours.

COURSE IV.—Hydrodynamics and Hydraulics. A study of fluid at rest and in motion. Deduction of the laws and their application to practical problems. Lectures and recitations. Open to those who have completed Mathematics I. and II., and Physics I., II. and III.

First term, three hours.

COURSE V.—Heat

First term, three hours.

COURSE VI.—Light.

Second term, three hours.

COURSE VII.—Magnetism and Electricity.

Throughout the year, two hours.

Courses V., VI., and VII. are courses in advanced theoretical and experimental work, intended to continue the work of Courses I. and II., and to prepare for graduate work. Open to those who have had Courses I. and II. and Mathematics I. and II.

COURSE VIII.—Teachers' Course. A course designed for those who expect to teach Physics. Lectures and demonstrations. Especial attention will be given to a review of the funda-

mentals of Physics, and to the best methods of presenting them to pupils. Each student will be required to present at least one subject before the class, and to design and construct one or more pieces of apparatus for laboratory or demonstration purposes. Open to those who have completed Courses I. and II.

Second term, two hours.

Political Science.

This department is open to those who have completed one year's work in History. Political theories and principles, ancient, mediaeval, and modern, are examined, as illustrated in the rise and fall of nations, and in the evolution of constitutions. In addition to the cultural worth of these investigations, it is the purpose to train for intelligent, responsible citizenship in the nation and community.

COURSE I.—Comparative Politics. This course is historical well as comparative in method. It begins with a study of the state, its origin, development, forms, and ends, and an examination into the governments of ancient Greece and Rome and of mediaeval times. Then follows a study of the development and a comparison of the present constitutions of England, France, and Germany. The work is based on Wilson's The State, Burgess' Political Science, and Goodnow's Comparative Constitutional Law.

COURSE II.—American Administration. This is a comprehensive study of national, local, and municipal government in the United States. Constitutional Law is examined, the sources of the national constitution being traced and the development of its chief powers analyzed. The practical working of the administration in central and local control is then studied and particular attention given to the conditions and the rule of cities. The work is based on Cooley's Constitutional Law, Bryce's American Commonwealth, and Wilcox's American City.

Second term, two hours.

Public Speaking.

The courses in public speaking are designed to train the student in the composition and delivery of the various forms of public address. So far as possible, the work is adjusted to the particular needs of the individual student.

COURSE I.—Interpretation of extracts from great public orations. Extemporaneous speaking. This course aims to develop directness, force, and ease in public address. During the first term each student is required to present an assigned passage at every recitation. During the second term fewer but longer assignments are made and more extemporaneous work is required.

Throughout the year, one hour.

COURSE II.—Argumentation. A course in debating. Study of the theory of debate. Lectures on methods of gathering and arranging material, kinds of proof, and methods of refutation. Illustrative readings from argumentative masterpieces. Brief-drawing. Extempore debate. Formal debate.

Elective for those who have completed Course I., and English II.

Second term, two hours.

COURSE III.—The Oration, its general structure and style. Illustrative readings from oratorical masterpieces. Development of oratorical themes. Practice in the writing and delivery of formal orations.

Elective for those who have completed Course I., and English II.

First term, two hours.

COURSE IV.—Practical platform work in the delivery of the colloquial, elevated, and impassioned styles of oratory. A systematic course in gesture. Lectures on the philosophy of expression with accompanying studies to be worked out by the pupil in platform presentation. This course will include in the second term the reading of one of Shakspere's tragedies.

Elective for those who have completed Course I.

Throughout the year, two hours.

COURSE V.—A systematic study of voice culture. Lectures on how to use the voice, defects, and how to overcome them. Practical work by the student in exercises for the development of the different forms and degrees of utterance, quality, pitch, force, in their relation to voice production.

Elective for those who have completed Course IV.

Throughout the year, two hours.

Special work for the individual pupil will be given in private lessons. A fee of ten dollars for each term hour will be charged.

Spanish Language and Literature.

COURSE I.—Elementary Spanish. Giese's First Spanish Book. Worman, First Spanish Book. Reading of such easy Spanish as Alarcon, El Capitan Veneno; Galdo's Dona Perfecta. Open to Juniors and Seniors.

Throughout the year, three hours.

Given in 1908-9.

COURSE II.—A study of Modern Spanish novels and dramas. Open to Juniors and Seniors.

Throughout the year, two hours.

Given in 1907-8.

Physical Training.

For Young Men.—The object of this department is to give the student growth and increase of strength; to provide health and symmetrical development. These objects are accomplished by regular class exercises in the gymnasium during the fall and winter, on the field in the spring, and by periods of optional work after class hours. Physical measurements and strength tests of all students are taken upon entrance and at the close of the college course, and also at such other times as seem necessary. These form the basis of comparison of the students' condition and needs, and determine the character and amount of exercise neces-

sary to overcome marked deficiencies, irregular development, or such deformities as are amenable to physical exercise.

Students will receive personal advice in reference to habits of life, exercise, study, and recreation, as well as suggestions pertaining to personal hygiene.

Regular exercise, consisting of Swedish work, military gymnastics, Indian club, wand, and dumb bell drills, principles of heavy gymnastics, is required of the men of the Sophomore and Freshman classes, three hours a week, from the middle of October to the middle of May. Elective work is offered the Junior and Senior classes.

For Young Women.—The aim of the work is to acquire a symmetrical development of the body as a basis for health and grace. The training is based upon Delsarte Philosophy of Expression, and the Swedish and German systems of free movements and light gymnastics. All young women are required to take the prescribed work unless excused on recommendation of the instructor.

The general work includes Indian club and dumb-bell exercises, flexing exercises to overcome stiffness, exercises to develop control of the muscles, and all devices in training that secure freedom of bodily action.

The Gymnasium for Women is equipped with the most modern apparatus. Opportunity is offered to do individual work under the direction of the instructor in addition to the regular class exercises. In the basement of Hulings Hall there is a bowling alley for the exclusive use of young women.

REQUIRED WORK.

For graduation in any course all work specified as required must be completed, and in addition subjects selected from the general list of electives sufficient to make a total of not less than one hundred twenty term hours. "Term hour" signifies one hour recitation weekly for one term of eighteen weeks. The prescribed work in physical training must also be completed. In the senior year a thesis and an oration are required. But in the Scientific and the Civil Engineering courses two theses or a thesis and an oration may be presented.

Sixteen recitations weekly is the regular number, but the Registrar may assign seventeen. No student may take more than seventeen or less than twelve hours work without the approval of the Registration Committee. In no case will additional hours be allowed except on the basis of previous high grade work.

In the following tables Arabic numerals denote the number of hour recitations weekly, i. e., the number of term hours. Roman numerals refer to the courses of instruction detailed on pages 35 to 67, where may be found full description of the character of the work.

Classical Course.

FRESHMAN YEAR.

	FIRST TERM	SECOND TERM
Latin I.	4	4
Greek I.	4	4
Mathematics I.	4	4
English I.	4	4

SOPHOMORE YEAR.

Latin II.	3	3
Greek II.	3	3
English II., III.	3	3
German I.	4	4
History I.	3	3

JUNIOR YEAR.

Philosophy I., II.	3	3
Elective (See Note)	11	11

SENIOR YEAR.

Elective	14	14

NOTE.—In the Classical Course, one year's work in science is required. Choice may be made from Biology I., II., Chemistry I., II., Physics I.

Latin and Modern Language Course.

FRESHMAN YEAR.

	FIRST TERM	SECOND TERM
Latin I.	4	4
French I. [See Note I.]	4	4
Mathematics I.	4	4
English I.	4	4

SOPHOMORE YEAR.

Latin II.	3	3
French II. [See Note I.]	4	4
English II., III.	3	3
History I.	3	3
Elective [See Note II.]	3	3

JUNIOR YEAR.

Philosophy I., II.	3	3
Elective	11	11

SENIOR YEAR.

Elective	14	14

NOTE I.—Students that offer French instead of German for admission will take German I. and II. instead of French I. and II. as scheduled.

NOTE II.—In the Latin and Modern Language Course, one year's work in Science is required. Choice may be made from Biology I., II., Chemistry I., II., Physics I.

Latin-Scientific Course.

FRESHMAN YEAR.

	FIRST TERM	SECOND TERM
Latin I.	4	4
Biology I., II.	4	4
Mathematics I.	4	4
English I.	4	4

SOPHOMORE YEAR.

Chemistry I.	4	..
English II., III.	3	3
Physics I.	4	4
French I. [See Note I.]	4	4
Elective	..	4

JUNIOR YEAR.

History I.	3	3
Philosophy I., II.	3	3
Elective [See Note II.]	9	9

SENIOR YEAR.

Elective [See Note II.]	14	14

NOTE I.—Students that offer French instead of German for admission will take German I. instead of French I., as scheduled.

NOTE II.—In the Latin-Scientific Course nine term-hours' work in Science is required in addition to what is scheduled in the required work. Choice may be made from Biology III., (or IV.), Physics II., III., Astronomy I., III., Geology I., II.

Scientific Course.

FRESHMAN YEAR.

	FIRST TERM	SECOND TERM
Biology I., II.	4	4
Mathematics I.	4	4
English I.	4	4
French I. [See Note I.]	4	4

SOPHOMORE YEAR.

Chemistry I., II., or Physics I.	4	4
English II.	3	..
French II. [See Note I.]	4	4
Mathematics II.	4	4
Elective	..	3

JUNIOR YEAR.

Physics I., or Chemistry I., II.	4	4
Geology I., II.	3	3
Astronomy I.	..	3
Elective [See Note II.]	8	5

SENIOR YEAR.

Philosophy I., II.	3	3
Elective [See Note II.]	11	11

NOTE.—Students that offer French for admission, but not German, will take German I. and II. instead of French I. and II. as scheduled. If both French and German are offered for admission, an advanced course in one of these languages will be taken in the Freshman year and another course in the Sophomore year.

NOTE II.—Two of the following courses must be taken: Biology III. (or IV.), Chemistry III., Physics III. or V. and VI., or VII.

Civil Engineering Course.

FRESHMAN YEAR.

	FIRST TERM	SECOND TERM
Mathematics I.	4	4
Graphics I., II.	4	4
English I.	4	4
French I. [See Note]	4	4

SOPHOMORE YEAR.

Mathematics II.	4	4
Graphics III.	3	3
Engineering I.	..	3
Physics I.	4	4
Physics II.	2	2
English II.	3	..

JUNIOR YEAR.

Graphics IV., V.	3	3
Engineering II.	3	..
Engineering III.	3	3
Physics III.	2	2
Chemistry I., II.	4	4
Astronomy I.	..	3

SENIOR YEAR.

Engineering IV.	4	4
Geology I.	3	..
Elective	6	9

NOTE.—Students that offer French for admission, but not German, will take German I. instead of French I. as scheduled. If both French and German are offered for admission, an advanced course in one of these languages will be taken in the Freshman year.

List of Electives.

The following list of elective studies includes all subjects that are elective in any of the courses of study. Some of the subjects are required in one or more of the courses of study, but are elective in others. The list is open to all students under the conditions named below.

1. The student must be fully prepared for the work.

2. He must avoid all conflicts in hours.

3. So far as posible all required work below his rank must be completed before advanced electives are chosen. This rule may be waived in cases where it is necessary in order that the student may be ready for a particular line of work in the latter part of his course.

4. A study once elected must be pursued to the end of the year or to the completion of the subject. No credit for graduation will be given for partial courses unless by arrangement made with the instructor and the Registrar before the study is begun.

5. The student's choice of elective work must exhibit a definite and coherent plan.

6. The faculty reserves the right to disapprove choice of electives.

The Arabic numerals refer to the number of hour recitations weekly; the Roman numerals refer to the detailed description of the courses of instruction found on pages 35 to 67.

SUBJECTS.	TERM. FIRST	TERM. SECOND
Astronomy I	..	3
Astronomy II	2	..
Astronomy III	3	3
Biology I., II	4	4
Biology III	3	3
Biology IV	3	3
Biology V., VI	4	4
Chemistry I., II	4	4
Chemistry III	3	3
Chemistry IV	3	3
Chemistry V	3	3
Chemistry VI	3	3
Chemistry VII	1	1
Economics I., II	3	3
Economics III., IV	2	2
Engineering I	..	3
English III	..	3
English IV	3	3
English V	3	3
English VI., VII	2	2
English VIII., IX	2	2
English X., XI	3	3
English Bible II	2	2
English Bible III	3	3
French I	4	4
French II	4	4
French III	3	3
French IV	3	3

SUBJECTS.	FIRST TERM.	SECOND TERM.
French V	3	3
French VI., VII	2	2
Geology I., II	3	3
Geology III	..	3
German II	4	4
German III	3	3
German IV	2	2
German V	1	1
German VI	2	2
Greek III	3	3
Greek IV	2	2
Greek V	2	2
Greek VI	4	4
Greek VII	2	2
Hebrew	4	4
History I	3	3
History II	3	3
History III	3	3
History IV	2	2
History V	2	2
Italian I	3	3
Italian II	2	2
Latin II	3	3
Latin III	3	3
Latin IV	4	4
Latin V	2	2
Latin VI	2	2
Latin VII	2	2

SUBJECTS.	FIRST TERM.	SECOND TERM.
Mathematics II	4	4
Mathematics III	2	2
Mathematics IV	3	3
Mathematics V	2	2
Mathematics VI	3	3
Philosophy I., II	3	3
Philosophy III., IV	2	2
Philosophy V., VI	3	3
Physics I	4	4
Physics II	2	2
Physics III	2	2
Physics IV	3	..
Physics V., VI	3	3
Physics VII	2	2
Physics VIII	..	2
Political Science I., II	2	2
Public Speaking, II., III	2	2
Public Speaking IV	2	2
Public Speaking V	2	2
Spanish I	3	3
Spanish II	2	2

GENERAL INFORMATION.

College Fees.

All students pay a fee of $60 a year, one half payable at the opening of each term This includes incidental, library, and gymnasium fees.

Students in the Civil Engineering Course and those who elect any of the technical subjects of that course pay an additional fee of $7.50 a term.

In the laboratories the following fees are charged each term:

Biology I., II	$ 2.00
Biology III., IV	4.00
Biology V., VI	5.00
Chemistry I., II	4.00
Chemistry III., IV	7.50
Chemistry V	2.50
Chemistry VI	10.00
Geology II., III	2.00
Physics II., V., VI., VII	2.00

In addition breakage of material furnished is charged at actual cost.

All college fees are due on the day of registration.

No student is admitted to class until all fees are paid or satisfactorily arranged for.

Living Expenses of Young Men.

The young men of the College board in clubs or in private families, the latter costing about one-third more than the former. The cost of good table board

is in this way reduced to from $2.25 to $3.00 a week. If the student has a room-mate, the necessary expenses for a year will fall within the following estimates:

	LOW.	LIBERAL.
Term fee	$ 60.00	$ 60.00
Room rent, fuel, light	27.00	45.00
Table board	80.00	108.00
Books	10.00	20.00
Total	$177.00	$233.00

To be added to these figures are laboratory fees, if the student pursues studies in which such charges are made. Students in the Civil Engineering Course pay an additional fee of $15 a year. The cost of books will vary greatly from term to term, but a fair average will fall within the limits given.

Expenses other than those enumerated depend largely on the student's tastes and habits, and the College does not undertake to estimate them. For the items mentioned the figures given are exact. Few students will have occasion for spending more than $250 a year. This, of course, does not include traveling expenses, clothing, or luxuries. An economical student can live on $200 a year; indeed not a few students spend less than this and yet live comfortably.

Young Women.

Allegheny College is a co-educational institution. It endeavors to give young women the highest educational advantages open to young men. Instruction is given in the same subjects and by the same professors, and young women have access to all departments of the college, and are eligible to all honors.

Hulings Hall. Young women not living at home or with relatives are required to live in Hulings Hall. The constant aim is to furnish here an ideal college home for young women, where they shall be surrounded with influences which promote true and cultured womanhood. The Hall is under the charge of the Dean of Women, whose influence, with that of her competent assistants, is constantly felt in the social, moral, and religious development of the young women under her care.

For the proper maintenance of the Hall as a college home for young women certain specific rules are essential, but it is the policy of the college to make only such regulations as will best protect the interests of those who reside there. As large a measure of self government as possible is accorded and the young women of the upper classes assume a certain amount of responsibility for the management of the Hall. All proper freedom is allowed, but applicants for admission are reminded that the purpose of residence in Hulings Hall is not primarily social but educational, and the authorities in charge reserve the right to determine what best promotes the educational welfare of the residents in the Hall. A copy of the regulations for the government of the Hall will be sent on request.

The rooms are furnished with beds, mattresses, pillows, chairs, and tables. Each resident supplies the following articles: Sheets, pillow cases, and bed covering, towels, napkins, and individual table silver. The rates for a term, including heat and light, are as follows:

Main corridor, second and third floors.....$50.00
Rear corridor, second and third floors..... 40.00

When two persons occupy a room the rate for each is one-half the above amount. Room rent is payable at the opening of each term. Rooms may be reserved in advance by the payment of a deposit of one-half the rate for the term. Seniors are allowed first choice of rooms. Table board is $55 a term. The total expense for board, room, heat, and light for the year, where two occupy a room, is $160 if the room is in the front corridor and $150 if the room is in the rear corridor.

Aid to Students.

Self-Help.—Young men help themselves in several ways. A considerable number of the present students are earning their expenses in whole or in part. Some are employed in light work connected with the College or the boarding clubs. Some find in town opportunities for work of various kinds. A few are serving churches in the neighborhood of Meadville. It is the policy of the College to help students that help themselves.

The Lindley Endowment.—By the will of the late Miss Lucy Lindley, of Meadville, the College received the sum of ten thousand dollars, the interest of which is used to assist students dependent upon their own efforts to obtain an education. Application for aid from this fund should be made to the President. It should be remembered, however, that only a limited number of students can be aided in this way.

The Ballantyne Scholarship Fund.—Mrs Hettie F. Ballantyne, of Pittsburg, gave to the College thirty thousand dollars in memory of her late husband. The

fund is known as the James Alexander Ballantyne Scholarship Fund. The income is used to pay the college term fees, and in cases of need, certain other expenses, of the sons and daughters of ministers of the Pittsburg Conference, and of young men from the territory of that conference who are studying for the ministry. This fund is administered by the officers of the College Faculty on recommendation of a committee of the Conference. Application should be made to Rev. C. W. Smith, D. D., Pittsburg, Pa.

High School Scholarships.—The Board of Trustees has established forty prize scholarships of fifty dollars each, to be awarded each year to honor students in forty of the best high schools in the patronizing territory of the college. In case the graduating class numbers ten or less, the scholarship must go to the one having maintained the highest scholastic rank during his high school course. If the class numbers more than ten, and less than twenty-five, it may go to the first or second in rank, and if there are over twenty-five in the class the scholarship may go to any one of the three highest. The amount of the scholarship is to be applied on the fees of the freshman year.

Educational Society Loans.—Students who are members of the Methodist Church, showing promise of usefulness in any form of Christian activity, may secure loans from the Educational Society. These loans are without interest and need not be paid in full until five years after graduation. These loans are offered not only to candidates for the ministry, but also to all needy and worthy students who show prom-

ise of useful service in lines of Christian activity and are endorsed by their home Quarterly Conference. The loans are made by the Society on the recommendation of the Faculty.

No aid from the above mentioned funds, or from any other source, is given to students who use tobacco.

A student having received aid from any of the College funds will be given a letter of dismissal to enter another college only after all such aid shall have been returned.

Religious Culture.

The College was founded by Christian men for the promotion of Christian culture. It believes that education should always include, as its highest aim, the development of Christian character. It seeks to make the moral and religious life of the college community such that the student will be under as helpful influences as he would be in his own Christian home.

Chapel services are held each morning and all students are required to be present. Regular attendance on Sunday mornings at some church, selected by the student or his parents, is also required. Prayer meetings are held Wednesday evening of each week. The results are manifest in the quickening and strengthening of many in the religious life.

The Young Men's Christian Association and the Young Women's Christian Association are active and efficient organizations. Bible study classes and a mission study class are largely attended.

The religious influence of the College is not in any

sense sectarian, but Christian. On the rolls this year are representatives from sixteen Christian denominations.

The Adviser System.

Each student on registering is assigned to some member of the Faculty, who serves throughout the year as a special counsellor on all matters in which the student finds the need of frank and friendly advice. The relation between adviser and student is intended to be perfectly fraternal, without restraint on either side.

Clubs.

The Classical Club, composed of the instructors in the classical departments and about twenty-five advanced students, meets for the review of new books and current literature, and for the reading and free discussion of papers submitted by members on lines of classical investigation.

The Quill Club represents the journalistic and literary interests of the College. Its aim is to encourage press correspondents; to co-operate intelligently with the editors of the college publications and foster original and creative literary effort. It meets monthly. The membership is limited to thirty.

The Scientific Club meets weekly to discuss abstracts of current scientific papers or to listen to the presentation of original research of some of the members. The club includes members of the faculty and students in the college who are interested in scientific work.

The German Club is an organization of students

under the leadership of the professor of German that meets fortnightly for the purpose of arousing and sustaining interest in the German language as a vehicle of oral expression and of studying German life, institutions, and politics. Membership is open to all students who have had one or more years of regular class-room work in German.

The Society of Applied Science meets bi-monthly for the discussion of current scientific literature and for the discussion of original papers, submitted by the members, on the application of science to the practical affairs of life. All students in the Scientific and Civil Engineering courses are eligible to membership.

Prizes.

In addition to essay and oration prizes offered by the literary societies, two prizes are open to competition by students of the College classes.

The Wakefield Oration Prize.—Mr. James A. Wakefield, of Pittsburg, furnishes a prize of fifty dollars, in the name of his grandfather, Rev. Samuel Wakefield, D. D., awarded in February of each year, to the young man delivering the best oration. The winner of this prize represents the College in the Tri-State Oratorical League Contest held in May.

Class of Ninety Oration Prize.—The class of '90, which numbered forty-two persons, has established a prize of forty-two dollars to be awarded annually to the young man or woman delivering the best oration at a contest held in December of each year.

Heckel Prizes in Biology.—Two prizes, a first prize of thirty-five dollars and a second prize of fifteen dollars, are given each year by Dr. Edward B. Heckel,

of Pittsburg. These prizes are awarded for the best two theses written by graduate or undergraduate students upon biological subjects. The theses are presented on the first day of May and the prizes awarded the following Commencement Day.

Athletics.

Outdoor exercise and athletic sports under the direction of competent supervisors are fostered as helpful in complete physical training, but are made consistently secondary to scholastic work. No student may take part in athletic events without the consent of the physical director after a physical examination. The athletic interests of the college are in the hands of the Athletic Association, to which all members of the College are eligible, and the business is managed and all funds administered by an Athletic Advisory Board, composed of four members of the faculty and four students. All details of athletic contests must receive the sanction of the Athletic Board, and every precaution is taken to insure clean athletics. Players must be bona fide students taking not less than twelve hours work, must have been registered at the opening of the year in which they compete, may not have more than one condition in any preceding work or be delinquent in the current term's work, and may not receive remuneration, directly or indirectly, for their services. The College is a member of the Inter Collegiate Athletic Association and conforms to the minimum eligibility requirements of that organization. Competent coaches are provided.

Degrees.

The degree of Bachelor of Arts is conferred upon those who complete in a satisfactory manner the Classical, the Latin-Scientific, or the Latin and Modern Language Course.

The degree of Bachelor of Science is conferred upon those who complete in a satisfactory manner the Scientific or the Civil Engineering Course.

Bachelors of Arts of this College, or of another of equal rank, may pursue, in residence, work in not more than two distinct lines of study. On the completion of a full year's work, including a satisfactory thesis, the degree of Master of Arts is conferred. Bachelor of Arts of this College may, by vote of the Faculty, be permitted to pursue this work in non-residence, but in that case at least two years must be devoted to it. A student who has completed at the end of the first term of the Senior year all requirements for the degree of Bachelor of Arts, may pursue work in residence which shall count toward the degree of Master of Arts. Such a student may complete in non-residence the remainder of his work for the Master's degree and receive the degree one year after receiving the Bachelor's degree.

The degree of Master of Science is conferred upon Bachelors of Science on the same conditions as the degree of Master of Arts is conferred upon Bachelors of Arts.

Every person receiving a degree from the College pays a fee of five dollars for diploma.

REGISTER OF STUDENTS.

Classification.

The classification of the Catalogue is made in February of the college year, and gives the class rank for the year.

In the Senior class are included those who have completed by March 1, not less than one hundred four term-hours, of the one hundred and twenty necessary for graduation.

In the Junior class are included those who have completed by February 1, not less than seventy term-hours.

In the Sophomore class are included those who have completed by February 1, not less than thirty-six term-hours.

In the Freshman class are included all who have been admitted to the class during the year.

The small capitals following the names indicate the course of study: C standing for classical, LS for Latin-Scientific, L for Latin and Modern Language, S for Scientific, and E for Civil Engineering.

Graduate Student

Candidate for the Degree of Master of Arts.

Edson, Emma Marguerite.....Meadville
A. B., Allegheny College. Biology and Chemistry.

Seniors.

Abbott, Herbert Newell, E.....Erie
Adams, Katherine Moore, L.....Meadville
Berkey, Iva, L.....Ligonier
Bright, Stanley, C.....New Castle
Brown, Harry Morris, C.....Cochranton
Carroll, Henrietta Josephine, L.....Meadville
Coggon, Clifford Jason, E.....Castile, N. Y.
Courtenay, Amy Valliant, L.....Zanesville, O.
Cousins, Mary Rachel, C.....Hadley
Doane, Morse Ellis, E.....Meadville
Donaldson, Archibald Watson, E.....Du Bois
Evaul, J. Wilbur, E.....Palmyra, N. J.
Fish, Fernando Temple, E.....Leavenworth, Ind.
Fowler, Ethel Clarinda, L.....Meadville
Fowler, Jennie Mildred, L.....Meadville
Gartner, Dan Arthur, E.....Meadville
Gill, Charles Wesley, C.....Ronald
Griggs, Clarence Harry, E.....Falconer, N. Y.
Hartung, Charles A., L.....Evans City
Hoch, Dolph Augustus, E.....Chicora
Horn, Reuben Kenneth, E.....Wilkinsburg
Hull, Harold H., LS.....Greenville
Irwin, Ralph Edward, LS.....Meadville
Johnson, Hattie Olivia, L.....Jamestown, N. Y.
Jones, Olin Clarke, C.....Ashtabula, O.
Kelley, Elijah Wilson, L.....Versailles
Kightlinger, Ralph Blaine, E.....Meadville
La Bounty, Francis Louis, C.....Ashtabula, O.
Lotz, Anna Laura, L.....Kinsman, O.
Lynch, Mary Elizabeth, C.....Corry
McClintock, Walter John, L.....Meadville
McKinney, Ralph Garfield, L.....Franklin
Main, William Robert, LS.....Titusville
Marhofer, Anna Eleanor, L.....Meadville
Martin, George Granville, E.....Warren, O.
Miller, Benjamin Franklin, E.....Mt. Pleasant
Miller, Frank Purl, L.....Conneaut Lake
Miner, Wallace Herman, C.....Meadville

Phillips, Florence Hester, L.....Youngstown, O.
Roberts, Elizabeth Mae, L.....Meadville
Robinson, Samuel Worthington, C.....Boston
Seybolt, James Marsena, E.....Meadville
Slater, Mary Ann, LS.....Youngsville
Smith, Larue Free, E.....Guys Mills
Stockton, Frank Tenney, C.....Meadville
Vosler, Ray, E.....Greenville
Weber, Floyd Porter, E.....Meadville

Seniors 47

Juniors.

Anderson, Robert William, E.....Meadville
Andrews, Archibald Dickson, L.....Meadville
Andrews, Ethel Aurelia, L.....Meadville
Andrews, Robert Parker, C.....Pittsburg
Bash, Vera, LS.....Beaver
Beebe, Josette Hilda, L.....Meadville
Brown, Oscar Minns, L.....Greenville
Callahan, Richard Beatty, C.....McKeesport
Cappeau, William Arthur, E.....Reibold
Colter, Thomas Archbold, LS.....Meadville
Cooley, Fred Boughton, L.....Kingsville, O.
Crowe, Edward Francis, L.....Meadville
Danford, Juanita Bernice, C.....Duquesne
Dermitt, Jennie Lyster, C.....Franklin
Etter, Elizabeth Katherine, L.....East Greene
Fullerton, Clifford Sherman, E.....Ridgway
Giesey, Earle McAdams, C.....Wheeling, W. Va.
Ginn, Robert, E.....Piqua, O.
Greer, Charles Thomas, C.....New Castle
Hart, May Esther, C.....Girard
Hepfinger, Lillian, L.....Warren
Hilborn, Howard Davidson, E.....Kane
Houser, Otto Henry, L.....Meadville
Irvine, Francis, E.....Tidioute
King, Merle William, C.....Jamestown, N. Y.
Knapp, Frank Lyle, L.....Paulding, O.
Lick, Maxwell John, LS.....Meadville
Lyon, Fannie Winifred, L.....Meadville
McGranahan, Elma, L.....Meadville
Mackey, William Thompson, C.....New Castle
Miller, Arthur Devoe Powell, C.....Pittsburg
Miller, Karl Andrew, E.....Meadville
Neale, Nulu Nihilson, L.....Reynoldsville
Nelson, Hugh Melvin, E.....Kane
Perry, Archie C., E.....Oil City
Phillips, Harriette Bell, L.....Youngstown, O.
Pratt, Joseph Dover, L.....Wampum

Stanley, Harry Homer, E.....Ten Mile Bottom
Thomas, Donald Steadman, C.....Chicora
Thomas, William Evan, L.....Tidioute
Wright, Helen Lucy, ML.....Dunkirk, N. Y.

Juniors 41.

Sophomores.

Aiken, William James, C.....Port Perry
Ball, Wendell Phillipp, E.....North Girard
Beatty, Mabel Alicia, L.....Oil City
Bethune, Laura Edith, L.....Turtle Creek
Bond, Mary Louise, L.....Meadville
Bullock, Hazel, L.....Cambridge Springs
Burchard, Charles Winfield, LS.....Townville
Carpenter, Harley D., E.....Meadville
Cole, Wilson Griffin, C.....Glass Port
Cravner, William Charles, C.....Meadville
Crawford, Roscoe Campbell, L.....New Brighton
Deemer, Paul C., L.....Lisbon, O.
Elkin, Cortlandt Whitehead, C.....Smicksburg
Finley, Phoebe Lockard, L.....McKeesport
Fishel, Harry McKee, C.....Pittsburg
Fitch, Jessie Frances, L.....Greenville
Flaugh, William Calvin, E.....Meadville
Fugate, Edith Lucinda, C.....Du Bois
Gillett, Emma Aline, L.....Kane
Grauel, Florence May, L.....Sharpsburg
Hamm, Harry Hess, LS.....Knox
Henry, Olga Riene, L.....Punxsutawney
Houghton, Elizabeth Gladys, L.....Ripley, N. Y.
Johnson, Charles Wesley, C.....Braddock
Keister, John Ridinger, C.....Irwin
Knoell, William Frederick, L.....Pittsburg
Lewis, Charles Fletcher, L.....Meadville
Lindsley, Leon Jesse, L.....Corry
Lord, Leroy Isaiah, C.....Oakmont
Lyon, Richard Addison, LS.....Millvale
McKinney, Florence May, C.....Corry
McKinney, John Hudson, L.....Franklin
McKinney, William Lord, C,.....Philadelphia
McNees, Sterling Glenn, S.....Kittanning
Martin, Chauncey James, E.....New Castle
Miller, Ralph Erskine, E.....Mt. Pleasant
Mills, Ethel May, L.....Waterford
Millward, William, LS.....Crafton

Miner, George Lewis, E.....Meadville
Morrison, Bruce Manville, C.....Lock Haven
Morrison, Maurice Everard, E.....New Kensington
Mould, William Leighton, L.....New Kensington
Nichols, Mary Gertrude, L.....Sharon
Parsons, Percy Paul, LS.....Reynoldsville
Peters, Charles Orley, LS.....Albion
Rist, Bessie Vera, L.....Dawson
Rodkey, Clara May, L.....Kittanning
Sansom, Mary Moorhead, L.....Clarion
Schaffner, Perry Blaine, C.....Pueblo
Seipp, Willa Frances, L.....Pittsburg
Sherwin, Lou Woodside, C.....Munhall
Siggins, Ralph C, L.....Tidioute
Skellie, Fred Albert, LS.....North East
Smith, Frank Glenroy, E.....Erie
Sowash, Carrie Lillian, L.....Irwin
Stewart, Charles Franklin, C.....Hadley
Thomas, Grace, C.....Union City
Wheeling, Clara, L.....Oil City

Sophomores 57.

Freshmen.

Akin, Joanna, L.....Titusville
Andrews, Grover Charles, C.....Conneaut Lake
Baker, Clarence, L.....Butler
Bartoo, Bernard Arlo, C.....Greenville
Beebe, Margaret Hyde, C.....Meadville
Benedict, Lee Landseer, E.....Titusville
Berry, Ethel Miller, L.....Sheridanville
Birchard, Edith Elizabeth, L.....Cambridge Springs
Blasdell, David Joslin, C.....Dayton, N. Y.
Bly, Lena Rosalia, L.....Sherman, N. Y.
Boyd, Reuben Earl, C.....Irwin
Bright, Frederick, L.....New Castle
Broadbent, John Howard, C.....Beaver
Brown, Frank Boyle, LS.....Leechburg
Bunce, Mildred Florence, L.....Meadville
Burt, William Wright, LS.....Zurich, Switzerland
Braymer, Clyde Stewart, E.....Meadville
Campbell, Andrew McFate, E.....Butler
Campbell, Edward Percy, C.....Braddock
Campbell, Sophia Bell, L.....Butler
Chase, Louise, L.....Greenville
Chilcote, Thomas Franklin, C.....Meadville
Clulow, George Henry, C.....Meadville
Cole, Ralph Richard, E.....Andover, O.
Cottingham, Nellie Mary, L.....Waterford
Cousins, Benjamin Franklin, C.....Hadley
Croasmun, Dale Forrest, L.....Redclyffe
Crowell, Earl McVay, L.....Corry
Dennis, Herbert Knight, L.....Meadville
Diffenderfer, Roy Ormond, E.....Butler
Douthitt, Carl Czerney, S.....Sheradenville
Drum, Raymond Borland, S.....California
Duerr, Phillip William, E.....Meadville
Dungan, Helen Amelia, C.....Corry
Enterline, Karl Preston, S.....Kittanning
Ferrall, William Ello, L.....Lisbon, O.
Fitzgerald, Irene Ray, L.....Clarion
Fixel, William Gustaf, L.....Meadville

Gahan, James Reid, S.....Titusville
Gaston, Marie Eleanor, L.....Meadville
Gehr, Ernest Ray, L.....Saegertown
Gould, Harley Nathan, LS.....West Springfield
Grandey, Joseph LeRoy, C.....Elwood City
Greene, Mary Bertha, L.....Bellevue
Hamaker, Charles Townsend, E.....Meadville
Hammett, Lottie Shirley, LS.....Pittsburg
Hatch, Bernice Gertrude, L.....Union City
Hayward, Anna Walker, C.....Fredonia, N. Y.
Hickernell, Louis Max, LS.....Saegertown
Hilborn, Claire Egbert, C.....Kane
Howard, Grace Alberta, L.....Titusville
Hubbard, Earle N., C.....Jerome, N. Y.
Humes, Georgia Ella, L.....Cambridge Springs
Illingworth, Katherine Mae, L.....Insein, Burma
Jones, Clare Newton, E.....Corry
Jones, Julia Martha, L.....Kane
Kauffman, Rose M., L.....Dunkirk, N. Y.
Lamb, Harold Henry, C.....Wilkinsburg
Lauffer, Verna Frances, L.....Harrison City
Lewis, Mattie May, L.....Knox
Lytle, Lenore Y., L.....Warren
McCall, Clarence Andrew, E.....Greenville
McLean, Ellen Leone, L.....Meadville
McLean, Mabel Grace, L.....Union City
Marcey, Charles Howard, E.....Cambridge Springs
Mason, James Edward, LS.....Wilmerding
Maxwell, Samuel Laverne, L.....Oil City
Melville, Jean Ellen, L.....Collinwood, O.
Miller, Grace Hattie, L.....Tarentum
Miner, John Lynn, LS.....Punxsutawney
Morgan, Walter Leslie, C.....Pittsburg
Murray, Helen Grace, L.....Erie
Murray, Norman Daniel, L.....Conneaut, O.
Nelson, Andrew Julius, L.....Warren
O'Connor, James Walker, LS.....Norfolk, Neb.
Parsons, Caroline, L.....Charleroi
Penman, Essex, E.....West Newton

Phillips, Roy Laverne, E.....Meadville
Pratt, Maud Alice, L.....Reynoldsville
Riblet, Harry Gaillard, E.....Erie
Robinson, Elisha, Jr., S.....Parker's Landing
Ruhling, George Hutze, E.....McKean
Russell, Raymond R., L.....Butler
Scott, Bert Llewellyn, C.....Corry
Seidel, Harry Clyde, L.....Sharpsburg
Sheppard, William Johnce, LS.....Meyersdale
Shires, Cecelia Forney, L.....Mansfield, O.
Smith, Hazel Gladys, C.....Conneaut, O.
Smith, Lillie La Verne, C.....Tarentum
Steele, Ethel May, L.....Punxsutawney
Steffy, John Logan, C.....Elizabeth
Stewart, Frank Everhart, LS.....Williamsburg
Stidger, William Leroy, L.....Moundsville, W. Va.
Stockdale, Robert Clarke, C.....Porter
Strickland, Alice May, C.....Cattaraugus, N. Y.
Swick, William Arthur, LS.....Beaver Falls
Tillotson, Mabel Ida, L.....Corry
Urick, Alfred William, E.....Meadville
Von Storch, Mary Ritter, L.....Bradford
Vosburgh, Susanna Martina, L.....Attica, N. Y.
Walker, Wallace Delamater, S.....Meadville
Walters, Mary Estella, C.....Meadville
Ward, Grace Virginia, L.....Meadville
Weeter, Harry Montgomery, C.....New Bethlehem
White, Helen Cromwell, S.....Bradford
Wilkinson, Abram, E.....Meadville

Freshmen 106.

Special Students.

Bork, Anna Rosalie.....Meadville
Burnham, Rena J.....Erie
Clarke, Charles Harold.....Conneaut, O.
Deemer, Homer Leroy.....Lisbon, O.
McDowell, Alice Cochrane.....Meadville
Marble, Edith Mildred.....Mt. Jewitt
Marvin, Charles Lester.....Meadville
Mason, Madison Charles Butler, Jr.....Cincinnati, O.
O'Donnell, Mary Louise.....Warren
Reed, Marion Mohler.....Meadville
Tarr, Anna.....Raymore, Mo.
Thompson, Edith Josephine.....Tidioute
Watson, Evelyn Mabel.....Eden, N. Y.
Werner, John Harris.....Hanover, Kan.

Special 14.

Summary.

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Graduate Student	..	1	1
Seniors	33	14	47
Juniors	28	13	41
Sophomores	37	20	57
Freshmen	64	42	106
Special	5	9	14
Total	167	99	266

DEGREES CONFERRED JUNE 18, 1906.

Doctor of Laws.

William D. Porter.

Doctor of Divinity.

Albert C. Knudson.
Clement W. Miner.
William W. Youngson.

Master of Arts.

Norman P. Champlin.
Archer R. Elliott.
Helen E. McClintock.
Daniel M. Paul.
Harry L. Smith.
Paul Weyand.

Bachelor of Arts.

Elsie Frances Ball.
Joseph Mac Calvin.
Ethel J. Canfield.
Albert Wilkins Comfort.
John Raymond Crawford.
Floyd Lavern Darrow.
Mabel Evelyn Deane.
Claude Russell Dye.
Jennie Fitzgerald.
Thomas Fornear.
Georgia Bernice Gallup.
John Richmond Giblyn.
Nora Hildegarde Giele.
Don Speed Smith Goodloe.
Harriet Kelsay.
John William King.
Goffrey A. Lyon.
Katherine May McAlister.
Frank Harry McLaughlin.
Effie Alberta Milliren.
Adelaide C. Ottaway.
Nathan Harley Phillips.
Andrew Wells Robertson.
Frederic A. Shaffer.
Ross Maxwell Stuntz.
Watkin Powell Sturtevant.
Louis William Swanson.
William Sanders Taft.
Frank Meredith Thompson.
Charles Alphonso Wilson.
Nellie Gertrude Wilson.

Bachelor of Science.

Daniel Bloomfield Drake.
Walter William Gleason.
Leroy George Gartner.
Ben Rossiter.
Fred N. Tribby.

PHI BETA KAPPA.

ETA CHAPTER OF PENNSYLVANIA.
Chartered September 2, 1901.

OFFICERS.

President.
President William H. Crawford.

Secretary.
Professor William A. Elliott.

MEMBERS INITIATED IN JUNE, 1906.

From the Senior Class.

Elsie Francis Ball.
John Raymond Crawford.
Floyd Lavern Darrow.
Mabel Evelyn Deane.
Watkin Powell Sturtevant.
Louis William Swanson.

From the Alumni.

Charles W. Deane, Ph.D.
Rev. Frank M. Kerr, D. D.
Rev. Edward S. McChesney, D. D.
Herbert W. Rand, Ph.D.

Annual Address June 19, 1906.
Ida M. Tarbell, L. H. D.
Subject, "Intellectual Integrity."

Addresses and Lectures for the Year 1906-7.

Rev. Charles W. Smith, D. D., LL. D., Pittsburg.
June 17—Sermon before the Christian Associations.

Ida M. Tarbell, L. H. D., New York.
June 19—Annual Address before the Phi Beta Kappa Society.

Leon H. Vincent, Boston.
Course on American Historians.
April 11.—1. Bancroft.
12.—2. Prescott.
13.—3. Motley.
14.—4. Parkman.

Rev. M. C. B. Mason, D. D., Cincinnati.
April 23.—The Problem of the Colored Man.

Jacob Riis, New York.
May 1.—The Problem of the Poor.

Professor John Duxbury, England.
May 31.—1. Prince Jonathan.
2. The Book of Job.

Bishop James M. Thoburn, D. D., LL.D., Bombay.
Oct. 4.—Fifty Years in India.

Rev. Wm. A. Quayle, D. D., Chicago.
Oct. 4.—1. A Tragedy of Greatness.
2. Jean Valjean.

Bishop Charles C. McCabe, D. D., Philadelphia.
Oct. 30.—The Bright Side of Life in Libby Prison.

Bishop Wm. Burt, D. D., Zurich.
Oct. 31.—The Regeneration of Italy.

Rev. Edwin A. Schell, D. D., Crawfordsville, Ind.
Nov. 3.—Ben Hur and Its Author.

Bishop M. C. Harris, D. D., LL.D., Yokahama.
Nov. 27.—The New Japan.

Rev. Charles Bayard Mitchell, D. D., Cleveland.
Jan. 17.—Sermon on Day of Prayer.

Allegheny College Preparatory School.

This school is under the direct control and supervision of the college authorities, but has its own building and a distinct corps of instructors.

It aims to prepare students for college with a minimum expenditure of time. It is realized that many students looking forward to a college course are precluded by age or by lack of early advantages from taking a regular four years' course in academy or in high school. Young men and women of maturity can by thorough application fit themselves for college in less time than is necessary for younger and less mature persons. Earnest and capable younger pupils may also in some cases gain time in fitting for college. The work is systematic and thorough and every effort is made to enable the student to work to the best advantage. Under certain limitations students may take a part of their work in college classes. Students registered in the college also who are deficient in certain subjects can pursue these studies under skilled instruction and with every facility for accurate and thorough work.

A fine new building containing in addition to class rooms, an assembly room, society rooms, a chemical laboratory, and a gymnasium, is used by the school.

All instruction is given by college graduates, teachers of thorough preparation and successful experience.

Full particulars, including lists of the instructors and students, are found in the catalogue of the school, a copy of which will be sent on request to the Principal, Frederick S. Breed, A. M.

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